

Revised Final Environmental Impact Report

SCH No. 2004021002

Volume II
Section 3.0

LANDMARK VILLAGE

Prepared By:



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County Project No. 00-196 (5)
General Plan Amendment No. 00-196
Sub Plan Amendment No. 00-196
Specific Plan Amendment No. 00-196
Vesting Tentative Tract Map No. 53108
SEA Conditional Use Permit No. 200500112
Oak Tree Permit No. 00-196
Off-Site Materials Transport Approval No. CUP00-196
Conditional Use Permit (Off-Site Grading) CUP00-196

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Prepared for:

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Since the January 9, 2008 Commission consent calendar meeting, the applicant has worked with County staff to add information and include minor changes to the proposed project and its setting, and to update data and other information in the Landmark Village Draft EIR. In order to provide the public and other interested agencies and organizations with a meaningful opportunity to comment upon the new information presented, County staff has required recirculation of the Draft EIR as revised.

3. SITE LOCATION AND DESCRIPTION

The Landmark Village project site is located in unincorporated Los Angeles County, within the Santa Clarita Valley Planning Area, and mostly within the approved Newhall Ranch Specific Plan boundary. The Santa Clarita Valley Planning Area is generally surrounded by the Los Padres and Angeles National Forest areas to the north; Agua Dulce and the Angeles National Forest to the east; the major ridgeline of the Santa Susana Mountains, which separates the Santa Clarita Valley from the San Fernando and Simi Valleys, to the south; and the County of Ventura to the west. The Landmark Village tract map site is located immediately west of the confluence of Castaic Creek and the Santa Clara River. The Santa Clara River forms the southern boundary of the tract map site, while the northern tract map boundary is defined by State Route 126 (SR-126). The eastern tract map boundary abuts Castaic Creek. The City of Santa Clarita is located further east of the project site, just beyond Interstate 5 (I-5).

4. PROJECT DESCRIPTION¹

The Landmark Village proposed project is the first phase of implementing the approved Newhall Ranch Specific Plan. Specifically, the project applicant proposes to develop the 292.6-acre Landmark Village tract map site, located in the Riverwood Village within the boundary of the approved Specific Plan. To facilitate development of the Landmark Village tract map site, several off-site project-related components would be developed on an additional 770.8 acres of land that, for the most part, is within the approved Specific Plan boundary (**Figure 1.0-3, Project Boundary/Environmental Setting**, shown later in this section).² These project-related components include the following:

- A cut and fill grading operation, which includes fill imported to the tract map site from a 181-acre borrow site (and related haul routes), located south of the Santa Clara River (the Adobe Canyon borrow site); grading to accommodate roadway improvements to SR-126; grading the utility corridor area, which runs parallel to SR-126; and constructing ~~four~~three new debris basins (a total of four constructed) for stormwater flows collected by the tract map's storm drainage system on approximately 120 acres of land, located directly north of SR-126 and east and west of Chiquito Canyon (Chiquito Canyon grading site);

¹ Minor revisions to the project description have been made since circulation of the RDEIR. Those changes are reflected in the Landmark Village Final EIR, Topical Response 12.

² Portions of the proposed utility corridor, Chiquito Canyon grading site, and the proposed potable water tank site (located within the Valencia Commerce Center business park), and the proposed reclaimed water tank (built and located on Round Mountain directly east of Interstate 5) are outside the boundary of the Newhall Ranch Specific Plan, as shown in the RDEIR, Section 1.0, Project Description, Figure 1.0-3.

- 227-acre utility corridor, which would run parallel to SR-126, from the western boundary of the tract map site to the approved Newhall Ranch WRP near the Los Angeles County/Ventura County line, from the eastern boundary of the tract map site to the Old Road/I-5, and then south to Round Mountain, which would extend municipal services to and from the tract map site;
- Potable water tank;
- Conversion of an existing potable water tank to a recycled water tank; and
- Construction of the Long Canyon Road Bridge, bank stabilization and storm drainage improvements.

The land uses proposed as part of the Landmark tract map site are consistent with the approved Specific Plan. The Specific Plan's approved Land Use Plan designates the Landmark Village tract map site for single- and multi-family residential, mixed-use, and commercial land uses.³ The Landmark Village tract map site proposes construction of 1,444 residential dwelling units (308 single-family units, 1,136 multi-family units), up to 1,033,000 square feet of mixed-use/commercial uses, 9-acre elementary school, 16-acre Community Park, fire station, public and private recreational facilities, trails, trailhead, park and ride, and road improvements (see **Table 1.0-3, Landmark Village Statistical Summary**, shown later in this section).

The project applicant is requesting approval of the following discretionary entitlements to allow for construction of the proposed Landmark Village project site: (a) General Plan Amendment No. 00-196, Sub-Plan Amendment No. 00-196 and Specific Plan Amendment No. 00-196; (b) Vesting Tentative Tract Map No. 53108; (c) Significant Ecological Area (SEA) Conditional Use Permit (CUP) No. 200500112 for project-level development within the Specific Plan's River Corridor Special Management Area (River Corridor SMA)/ SEA 23 boundaries; (d) Oak Tree Permit No. 00196; (e) Off-Site Soil Transport Approval (part of CUP No. 00-196 entitlement request); (f) CUP No. 00-196 for off-site grading in excess of 100,000 cubic yards and construction of the off-site water tank; and (g) Modification to adopted County Floodway limits (collectively, "Project Approvals"). These Project Approvals are discussed in further detail later in this section.

Additional ministerial actions, such as grading permits, building plan review and building permits, would be required by the County prior to actual grading and construction of the proposed Landmark Village project site.

5. SUMMARY OF REVISIONS MADE IN RECIRCULATED EIR

Consistent with section 15088.5, subd. (g) of the *State CEQA Guidelines*, this section summarizes the revisions made to the previously circulated Draft EIR (November 2006):

³ See, Newhall Ranch Specific Plan (May 2003), Exhibit 2.3-1, Land Use Plan, Table 2.3-1, Specific Plan Overall Land Use Plan Statistical Table, and Exhibit 2.3-2, Village Plan (**Appendix 1.0**).

**Table ES-1
Summary of Significant Impacts and Mitigation Measures**

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES		
<p>Based on the analysis presented in the Geotechnical and Soil Resources section of this EIR, there are no active faults, landslides, or surficial failures on or in close proximity to the Landmark Village project site, and the potential for earthquake-induced slope failures is considered negligible. Impacts associated with liquefaction and seismically induced settlement are considered less than significant. Due to the relative flatness of the project site, low liquefaction potential, subsurface soil stratigraphy, and proposed improvements in the river channel area, there would be no impacts relative to lateral spreading due to liquefaction. In addition, there would be no impacts relative to hydroconsolidation. However, unless mitigated, specific project-related significant geologic, soil, and geotechnical impacts could occur in the following areas:</p> <ul style="list-style-type: none"> • Along cut/fill and bedrock/alluvium contacts, there is a future potential hazard due to the combination of dynamic compaction and differential settlement, along with differential materials response; • Development of lots underlain by transitions between different material types (e.g., bedrock to fill, bedrock to alluvium, etc.); • The clay-rich bedding planes of the Saugus Formation may represent a potential hazard from secondary seismogenic movement along bedding planes; • Construction and development within areas of high groundwater; • Soil conditions on the project site that would affect construction practices on future site development include expansive soils, soils with shrink-swell potential, corrosive soils, and low cohesion soils; • Shallow weak soils; 	<p>SP 4.1-1 The standard building setbacks from ascending and descending man-made slopes are to be followed in accordance with Section 1806.4 of the Los Angeles County Building Code, unless superseded by specific geologic and/or soils engineering evaluations. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 44)</p> <p>SP 4.1-2 The existing Grading Ordinance for planting and irrigation of cut-slopes and fill slopes is to be adhered to for grading operations within the project site. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 44)</p> <p>SP 4.1-3 In order to safeguard against major seismic-related structural failures, all buildings within the project boundaries are to be constructed in conformance with the Los Angeles County Uniform Building Code, as applicable.</p> <p>SP 4.1-4 The location and dimensions of the exploratory trenches and borings undertaken by Allan E. Seward Engineering Geology, Inc. and R.T. Frankian & Associates are to be noted on all grading plans relative to future building plans, unless the trenches and/or borings are removed by future grading operations. If future foundations traverse the trenches or borings, they are to be reviewed and approved by the project geotechnical engineer. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 45.)</p> <p>SP 4.1-5 <u>Wherever the Pacoima Formation is exposed, it may be potentially expansive; therefore, it is to be tested by the project soils engineer at the</u></p>	<p>With implementation of the identified mitigation measures, the proposed project's geologic, soil and geotechnical impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p>

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>grading plan stage to determine its engineering characteristics and mitigation requirements, as necessary. (This mitigation measure is not applicable because there is no Pacoima Formation on the tract map site or the borrow sites.)</u> Not applicable.</p>	
<ul style="list-style-type: none"> • High water tables requiring dewatering; • Low cohesion sands; and • Landslide potential at the Edison access road at the Chiquito Canyon grading site. <p>Applicable mitigation measures to address these impacts were identified in the certified Newhall Ranch Specific Plan Program EIR. This EIR recommends additional mitigation measures specific to the Landmark Village project site. In summary, with implementation of the mitigation measures set forth in the Geotechnical and Soil Resources section of this EIR, the proposed project will not result in significant unavoidable geologic, soil or geotechnical impacts.</p> <p>In compliance with Section 111 of the Los Angeles County Building Code, and according to the project geotechnical engineer (Seward), the site designated on the Geological/Geotechnical Maps, as shown on EIR Figures 4.1-1 through 4.1-3, is feasible for development, would be safe against hazards from landslide, settlement or slippage, and development of the site would not affect off-site property, provided the mitigation measures identified in Section 4.1 are adopted and implemented during project construction. With implementation of the identified mitigation measures, the proposed project’s geologic, soil and geotechnical impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p>	<p>SP 4.1-6 Should any expansive soils be encountered during grading operations, they are not to be placed nearer the finished surface than 8 feet below the bottom of the subgrade elevation. This depth is subject to revision depending upon the expansive potential measured during grading. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-7 If expansive materials are encountered at subgrade elevation in cut areas, the soils are to be removed to a depth of 8 feet below the “finished” or “subgrade” surface and the excavated area backfilled with non-expansive, properly compacted soils. This depth is subject to revision depending upon the expansive potential measured during grading. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-8 At the time of subdivision, which allows construction, areas subject to liquefaction are to be mitigated to the satisfaction of the project geotechnical engineer prior to site development. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-9 Subdrains are to be placed in areas of high ground water conditions or wherever extensive irrigation is planned. The systems are to be designed to the specifications of the Newhall Ranch Specific Plan geotechnical engineer.</p> <p>SP 4.1-10 Subdrains are to be placed in the major and minor canyon fills, behind stabilization blankets, buttress fills, and retaining walls, and</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>as required by the geotechnical engineer during grading operations. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-11 <u>Canyon subdrains may be installed in “V”-ditches or in a rectangular trench excavated to expose competent material or bedrock as approved by the geotechnical engineer. (This mitigation measure applies to the Canyon fills proposed in the Adobe Canyon borrow site and is therefore not applicable.)</u> Not applicable.</p>	
	<p>SP 4.1-12 The vertical spacing of subdrains behind buttress fills, stabilization blankets, etc., are to be a maximum of 15 feet. The gradient is to be at least 2 percent to the discharge end. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-13 Geological materials subject to hydroconsolidation (containing significant void space) are to be removed prior to the placement of fill. Specific recommendations relative to hydroconsolidation are to be provided by the Newhall Ranch Specific Plan geotechnical engineer at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 44)</p> <p>SP 4.1-14 <u>Proposed structures on ridgelines will have a minimum 20-foot horizontal setback from the margin of the bedrocks to prevent perched or ground water levels where relatively impermeable materials can block downward migration. (This mitigation measure is not applicable to the Landmark Village project. The measure calls for proposed “structures on ridgelines” to have minimum horizontal setback requirements; however, the Landmark Village project does not propose construction of structures on any ridgelines due to the topographic conditions found on the site.)</u> Not applicable.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>SP 4.1-15 Subsurface exploration is required to delineate the depth and lateral extent of the landslides shown on the geologic map. This work shall be undertaken at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 15) Landslides must be mitigated through stabilization, removal, and/or building setbacks as determined by the Newhall Ranch Specific Plan geotechnical engineer, and to the satisfaction of the Los Angeles County Department of Public Works.</p> <p>SP 4.1-16 <u>At the subdivision stage, the existence of landslides designated with “3” on Figure 4.1-2, Existing Landslide Areas, and within or adjacent to the development area is to be confirmed. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 15.) If landslides are confirmed in these areas, they are to be mitigated through stabilization, removal, and/or building setbacks as determined by the Newhall Ranch Specific Plan geotechnical engineer. (This mitigation measure is not applicable to the Landmark Village project. The measure refers to the “existence of landslides” designated with a “3” on Figure 4.1-2 contained in the Newhall Ranch Specific Plan Program EIR. There are no such designated landslides within the boundaries of the Landmark Village tract map and borrow sites.)</u>Not applicable.</p> <p>SP 4.1-17 <u>The existence, or lack thereof, of landslides on or adjacent to the roadway alignments for the extension of Magic Mountain Parkway and Valencia Boulevard will be evaluated by subsurface investigations at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, p. 11.) If landslides are confirmed in these areas, they are to be mitigated through stabilization, removal, and/or building setbacks as determined by the</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>Newhall Ranch Specific Plan geotechnical engineer. (This mitigation measure is not applicable to the Landmark Village project. The measure refers to “landslides” on or adjacent to roadway alignments, which are not located within the boundaries of the Landmark Village project, including the off-site grading areas.)</u>Not applicable.</p> <p>SP 4.1-18</p> <p><u>The potential hazards associated with debris flow scars and other possible surficial failures located in proximity to the roadway alignments for the extension of Magic Mountain Parkway and Valencia Boulevard will be evaluated at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, p. 11.) These areas are to be mitigated as determined by the Newhall Ranch Specific Plan geotechnical engineer. (This mitigation measure is not applicable to the Landmark Village project. The measure refers to “debris flow scars and other possible surficial failures” located in proximity to roadway alignments, which are not located within the boundaries of the Landmark Village project, including the off-site grading areas.)</u>Not applicable.</p> <p>SP 4.1-19</p> <p>Remove debris from surficial failures during grading operations prior to the placement of fill. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 16)</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (continued)		
	<p>SP 4.1-20 All soils and/or unconsolidated slopewash and landslide debris is to be removed prior to the placement of compacted fills. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 45)</p> <p>SP 4.1-21 Cut-slopes, which will expose landslide material, are to undergo geologic and geotechnical evaluation at the subdivision stage to determine their stability and degree of consolidation. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 15.) Several options are available to mitigate potential landslide failure in the proposed cut-slopes. Landslides may be stabilized with buttress fills or shear keys designed by the Newhall Ranch Specific Plan geotechnical engineer; landslide material can be entirely removed and replaced with a stability fill; or the slope can be redesigned to avoid the landslide. Landslides underlying cut pad or road areas may be removed or partially removed if the Newhall Ranch Specific Plan Geologist and geotechnical engineer conclude that the landslide is stable and sufficiently consolidated to build on. Landslides located on ascending natural slopes above proposed graded areas will also require evaluation for stability. Unstable landslides on natural slopes above graded areas will either require stabilization, removal, or building setbacks to mitigate potential hazards. <i>(This mitigation would apply to the revised access road proposed to replace the existing Edison road to the power line tower involves creating small cut slopes in landslide material.)</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (continued)		
	<p>SP 4.1-22 <u>Additional geologic investigations are required prior to approval of future tentative maps which allow construction, or grading plans to determine the geologic and geotechnical feasibility of the fifteen (15) lots proposed in the High Country Special Management Area (SMA). (This mitigation measure is not applicable to the Landmark Village project. The measure refers to the 15 lots proposed in the High Country SMA, which is not located within the boundaries of the Landmark Village project site, including the off-site grading areas.)</u>Not applicable.</p> <p>SP 4.1-23 <u>Prior to construction of the road embankment located within landslide QIs II, a compacted fill shear key will be constructed at the property boundary. (R.T. Frankian & Associates, 19 September 1994, p. 6.) (This mitigation measure is not applicable to the Landmark Village project. The measure refers to a specific road embankment, which is not located within the boundaries of the Landmark Village project site, including the off-site grading areas.)</u> Not applicable.</p> <p>SP 4.1-24 <u>Landslides, which will not affect the proposed grading concept, are to be placed in Restricted Use Areas on the Final Maps. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 43.) (This mitigation measure is not applicable because landslides in and immediately adjacent to the borrow sites are required by LACDPW to be placed in restricted use areas until site-specific geotechnical elevations are completed and proposed mitigation is recommended.)</u> Not applicable.</p> <p>SP 4.1-25 <u>Surficial stability of cut-slopes designated with a "G" are to be fully evaluated at the subdivision stage, due to the possibility of</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>wedge failures or surficial material in the slope. <u>Corrective grading measures are to be presented in detail as mitigation at both the subdivision and Grading Plan stages of development. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, pp. 17, 43.) (This mitigation measure is not applicable to the Landmark Village project. The measure refers to "surficial stability" of certain designated cut-slopes, which are not located within the boundaries of the Landmark Village project site, including the off-site grading areas.)</u></p> <p>Not applicable.</p> <p>SP 4.1-26 <u>Cut slopes designated as "P" are potentially unstable and are to be fully evaluated at the subdivision stage to ascertain whether they are stable as designed. Corrective grading measures are to be presented in detail as mitigation at both the subdivision and Grading Plan stages of development. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, pp. 17, 43.) (This mitigation measure is not applicable to the Landmark Village project. The measure refers to "potentially unstable" designated cut slopes, which are not located within the boundaries of the Landmark Village project site, including the off-site grading areas.)</u></p> <p>Not applicable.</p> <p>SP 4.1-27 <u>Cut-slopes designated with a "U" are to be further investigated at the subdivision stage to confirm underlying geologic conditions and slope stability. Corrective grading measures are to be presented in detail as mitigation at both the subdivision and Grading Plan stages of development. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, pp. 17, 43.) (This mitigation measure is not applicable to the Landmark Village project. The measure refers to</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><i>designated "cut-slopes" requiring further investigation at the subdivision stage, which are not located within the boundaries of the Landmark Village project site, including the off-site grading areas.)</i></p> <p>Not applicable.</p> <p>SP 4.1-28 <u>Cut-slopes associated with the construction of the proposed extensions of Magic Mountain Parkway and Valencia Boulevard are to be further investigated at the subdivision stage to confirm the underlying geologic conditions and slope stability. Corrective measures are to be required if it is determined that the cut-slopes will not be stable. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, pp. 11 and 12.) (This mitigation measure is not applicable to the Landmark Village project. The measure refers to "cut-slopes" associated with construction of certain proposed road extensions, which are not located within the boundaries of the Landmark Village project site, including the off-site grading areas.)</u>Not applicable.</p> <p>SP 4.1-29 Orientations of the bedrock attitudes are to be evaluated by the Newhall Ranch Specific Plan engineering geologist to identify locations of required buttress fills. Buttress fill design and recommendations, if necessary, are to be presented as mitigation during the grading plan stage. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-30 All fills, unless otherwise specifically designed, are to be compacted to at least 90 percent of the maximum dry unit weight as determined by American Society for Testing and Materials (ASTM) Designation D 1557-91 Method of Soil Compaction. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-31 No fill is to be placed until the area to receive</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>the fill has been adequately prepared and approved by the geotechnical engineer. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p>	
	<p>SP 4.1-32 Fill soils are to be kept free of all debris and organic material. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-33 Rocks or hard fragments larger than 8 inches are not to be placed in the fill without approval of the geotechnical engineer, and in a manner specified for each occurrence. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-34 Rock fragments larger than 8 inches are not to be placed within 10 feet of finished pad grade or the subgrade of roadways or within 15 feet of a slope face. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-35 Rock fragments larger than 8 inches may be placed in windrows, below the limits given above, provided the windrows are spaced at least 5 feet vertically and 15 feet horizontally. Granular soil must be flooded around windrows to fill voids between the rock fragments. The granular soil is to be wheel rolled to assure compaction. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-36 The fill material is to be placed in layers which, when compacted, is not to exceed 8 inches per layer. Each layer is to be spread evenly and is to be thoroughly mixed during the spreading to insure uniformity of material and moisture. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-37 When moisture content of the fill material is too low to obtain adequate compaction, water is to be added and thoroughly dispersed until the soil is approximately 2 percent over optimum moisture content. (R.T. Frankian & Associates,</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	19 September 1994, Appendix I)	
	<p>SP 4.1-38 When the moisture content of the fill material is too high to obtain adequate compaction, the fill material is to be aerated by blading or other satisfactory methods until the soil is approximately 2 percent over optimum moisture content. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-39 Where fills toe out on a natural slope or surface, a keyway, with a minimum width of 16 feet and extending at least 3 feet into firm, natural soil, is to be cut at the toe of the fill. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-40 Where the fills toe out on a natural or cut slope and the natural or cut slope is steeper than 5 horizontal to 1 vertical, a drainage bench with a width of at least 8 feet is to be established at the toe of the fill. Fills may be placed over cut slopes if the visible contact between the fill and cut is steeper than 45 degrees. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-41 When placing fills over slopes, sidewall benching is to extend into competent material, approved by the geotechnical engineer, with vertical benches not less than 4 feet. (R.T. Frankian & Associates, 19 September 1994, Appendix I) Competent material is defined as being free of loose soil, heavy fracturing, or compressive soils.</p> <p>SP 4.1-42 When constructing fill slopes, the grading contractor is to avoid spillage of loose material down the face of the slope during the dumping and compacting operations. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p>	
	<p>SP 4.1-43 The outer faces of fill slopes are to be compacted by backing a sheepsfoot compactor over the top of the slope, and thoroughly covering all of the slope surface with</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>overlapping passes of the compactor. Compaction of the slope is to be repeated after each 4 feet of fill has been placed. The required compaction must be obtained prior to placement of additional fill. As an alternate, the slope can be overbuilt and cut back to expose a compacted core. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p> <p>SP 4.1-44 All artificial fill associated with past petroleum activities, as well as other existing artificial fill, are to be evaluated by the Newhall Ranch Specific Plan geotechnical engineer at the subdivision and/or grading plan stage. (Allan E. Seward Engineering Geology, 19 September 1994, Inc., p. 45) Unstable fills are to be mitigated through removal, stabilization, or other means as determined by the Newhall Ranch Specific Plan geotechnical engineer.</p> <p>SP 4.1-45 Surface runoff from the future graded areas is not to run over any natural, cut, or fill slopes. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 20)</p> <p>SP 4.1-46 Runoff from future pads and structures is to be collected and channeled to the street and/or natural drainage courses via non-erosive drainage devices. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 20)</p>	
	<p>SP 4.1-47 Water is not to stand or pond anywhere on the graded pads. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 20)</p> <p>SP 4.1-48 Oil and water wells that might occur on site are to be abandoned in accordance with state and local regulations. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 45)</p> <p>SP 4.1-49 If any leaking or undocumented oil wells are encountered during grading operations, their locations are to be surveyed and the current well conditions evaluated immediately. (Allan</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>E. Seward Engineering Geology, Inc., 19 September 1994, p. 21) Measures are to be taken to document the wells, abandonment, and remediate the well sites (if necessary) in accordance with state and local regulations.</p> <p>SP 4.1-50 The exact status and location of the Exxon (Newhall Land & Farming) oil well #31 will be evaluated at the subdivision stage. If necessary, the well will be abandoned in accordance with state and local regulations. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, p. 12).</p> <p>SP 4.1-51 <u>Survey control will be required to precisely locate the Salt Creek and Del Valle Faults at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 33) (This mitigation measure is not applicable to the Landmark Village project. The measure refers to certain faults, which are not located within the boundaries of the Landmark Village project site, including the off-site grading areas.)</u></p> <p>Not applicable.</p> <p>SP 4.1-52 <u>Additional subsurface trenching will be performed within the Holser Structural Zone on Newhall Ranch during the subdivision stage to evaluate its existence. Within Potrero Canyon, additional subsurface evaluation will be performed during the subdivision stage to confirm that nontectonic alluvial movement was the cause of surface ground cracking during the January 17, 1994 earthquake, and to evaluate the potential for shallow-depth faults. (Allan E. Seward Engineering Geology, Inc. 19 September 1994, p. 42, as revised above.) (This mitigation measure is not applicable to the Landmark Village project. The measure refers to subsurface trenching and additional subsurface evaluation required on areas of Newhall Ranch, which are not located within the boundaries of the</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>Landmark Village project site, including the off-site grading areas.)</u></p> <p>Not applicable.</p> <p>SP 4.1-53 <u>Precise Building Setback Zones for the Newhall Ranch Specific Plan site are to be defined at the subdivision stage. (This mitigation measure is not applicable to the Landmark Village project. The measure refers to “precise building setback zones,” which are not applicable to the Landmark Village project site, including the off-site grading areas.)</u></p> <p>Not applicable.</p> <p>SP 4.1-54 <u>Due to the potential activity of the Salt Creek and Del Valle Faults, site development is to remain outside of Building Setback Zones around fault traces, and the possible fault zone connecting them (see Figure 4.1-4). (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 42.) (This mitigation measure is not applicable to the Landmark Village project. The measure refers to certain faults, which are not located within the boundaries of the Landmark Village project site, including the off-site grading areas.)</u></p> <p>Not applicable.</p> <p>SP 4.1-55 <u>To minimize potential hazards from shattered ridge effects, structures and storage tanks proposed on ridgelines are to have a minimum 20-foot setback from the margins of the bedrock. Designation of specific building setbacks will require evaluation at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 40.) Building setback zones are to be identified on all site plans and tract maps for the site. (This mitigation measure is not applicable to the Landmark Village project. The measure refers to storage tanks on ridgelines within areas of Newhall Ranch, which are not applicable to the</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>Landmark Village project site, including the off-site areas.)</u></p> <p>Not applicable.</p> <p>SP 4.1-56 <u>The potential for ground motion and ground failure associated with a seismic event in proximity to the planned roadway alignments of Magic Mountain Parkway and Valencia Boulevard will be evaluated at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, p. 11.) Mitigation to reduce associated significant impacts will also be identified at that time. (This mitigation measure is not applicable to the Landmark Village project. The measure refers to planned roadway alignments within Newhall Ranch, which are not applicable to the Landmark Village project site, including the off-site grading areas.)</u></p> <p>Not applicable.</p> <p>LV 4.1-1 Prior to placing compacted fill, the ground surface shall be prepared by removing non-compacted artificial fill (af), disturbed compacted fill soils (Caf), loose alluvium, and other unsuitable materials. The geotechnical engineer and/or his representatives shall observe the excavated areas prior to placing compacted fill.</p>	
	<p>LV 4.1-2 After the ground surface to receive fill has been exposed, it shall be ripped to a minimum depth of 6 inches, brought to optimum moisture content or above and thoroughly mixed to obtain a near uniform moisture condition and uniform blend of materials, and then compacted to 90 percent per the latest American Society for Testing and Materials (ASTM) D1557 laboratory maximum density.</p> <p>LV 4.1-3 Removal depths for alluvium, older alluvium, and overlying soil/plow pan materials range from 4 to 16 feet and shall be as indicated on the</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>approved Geologic/Geotechnical Map.</p> <p>LV 4.1-4 Soil removals on the southwestern portion of the site shall be scheduled if possible during the summer or fall months, to minimize impacts to Grading from shallow groundwater. The contractor shall be prepared to implement dewatering systems, if necessary.</p> <p>LV 4.1-5 Pico and Saugus Formation bedrock shall be over-excavated 5 feet below proposed grade to eliminate cut-fill or bedrock-alluvium transitions in building pads. Expansive materials in the bedrock shall be over excavated 8 feet in building pad areas.</p> <p>LV 4.1-6 Slopewash that is locally present on the site adjacent to slope areas on the northern margin of the site shall be removed and recompact prior to the placement of compacted fill.</p> <p>LV 4.1-7 Compacted artificial fill along the northern margin of the site shall be assessed for building suitability at the grading plan stage.</p> <p>LV 4.1-8 Concrete, asphalt concrete and other debris stockpiled on the site shall be removed, and either ground up for use as sub-base material, or reduced into fragments small enough to be buried in the deeper portions of the fill.</p>	
	<p>LV 4.1-9 Where recommended removals encounter ground water, water levels shall be controlled by providing an adequate excavation bottom/slope and sumps for pumping water out as the excavation proceeds, or ground water may be lowered by installing shallow dewatering well points prior to grading. Partial removals of soils above the water table and soil improvement below the water table may be another option. Dewatering may be needed depending on the season when the removals are performed and the actual removal depths are determined. Contractors shall use piezometric</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>data for planning dewatering measures.</p> <p>LV 4.1-10 On-site soils, except any debris or organic matter, may be used as sources for compacted fills. Rock or similar irreducible material with a maximum dimension greater than 8 inches shall not be placed in the fill without approval of the geotechnical engineer. Rocks or hard fragments larger than 4 inches shall not compose more than 25 percent of the fill and/or lift. Any large rock fragments over 8 inches in size may be incorporated into the fill as rockfill in windrows after being reduced to the specific maximum rock fill size. Where fill depths are too shallow to allow large rock disposal, special handling or removal may be required. Much of the on-site alluvium and older alluvium is coarse-grained and lacks sufficient cohesion for surficial stability in fill slopes. Selective grading of fill materials with sufficient cohesion derived from on-site or imported fill shall be necessary for use in fill slopes.</p> <p>LV 4.1-11 The engineering characteristics of imported fill material shall be evaluated when the source area has been identified.</p>	
	<p>LV 4.1-12 Most of the slopes proposed on the site are fill slopes. Stability fills are recommended for all of the cut-slopes on the site; therefore, no cut-slopes will remain after the completion of grading. All fill slopes shall be constructed on firm material where the slope receiving fill exceeds a ratio of 5 to 1 (horizontal to vertical [h:v]). Fill slope inclination shall not be steeper than 2:1 (h:v). The fill material within approximately one equipment width (typically 15 feet) of the slope face shall be constructed with cohesive material selectively graded from on-site or import fills. Stability fills are recommended where cut-slope faces will</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>expose fill-over-bedrock or alluvium-over-bedrock conditions. These fills shall be constructed with a keyway at the toe of the fill slope with a minimum equipment width but not less than 15 feet, and a minimum depth of 3 feet into the firm undisturbed earth. Following completion of the keyway excavations, backfilling with certified engineered fill shall not proceed prior to the approval of the keyway by the project engineering geologist.</p> <p>LV 4.1-13 Backcut slopes for Stability fills shall be no steeper than the final face of the proposed fill.</p> <p>LV 4.1-14 Areas that are to receive compacted fill shall be observed by the geotechnical engineer prior to the placement of fill.</p> <p>LV 4.1-15 All drainage devices shall be properly installed and observed by the <u>project's licensed geotechnical engineer</u> and/or owner's representative(s) prior to placement of backfill.</p>	
	<p>LV 4.1-16 Fill soils shall consist of imported soils or on-site soils free of organics, cobbles, and deleterious material provided each material is approved by the geotechnical engineer. The geotechnical engineer shall evaluate and/or test the import material for its conformance with the report recommendations prior to its delivery to the site. The contractor shall notify the geotechnical engineer 72 hours prior to importing material to the site.</p> <p>LV 4.1-17 Fill shall be placed in controlled layers (lifts), the thickness of which is compatible with the type of compaction equipment used. The fill materials shall be brought to optimum moisture content or above, thoroughly mixed during spreading to obtain a near uniform moisture condition and uniform blend of materials, and then placed in layers with a thickness (loose) not exceeding 8 inches. Each layer shall be</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>compacted to a minimum compaction of 90 percent relative to the maximum dry density determined per the latest ASTM D1557 test. Density testing shall be performed by the geotechnical engineer to verify relative compaction. The contractor shall provide proper access and level areas for testing.</p> <p>LV 4.1-18 Rocks or rock fragments less than 8 inches in the largest dimension may be utilized in the fill, provided they are not placed in concentrated pockets. However, rocks larger than 4 inches shall not be placed within 3 feet of finish grade.</p> <p>LV 4.1-19 Rocks greater than 8 inches in largest dimension shall be taken off site, or placed in accordance with the recommendation of the soils engineer in <u>on-site</u> areas designated as suitable for rock disposal <u>or placement</u>.</p>	
	<p>LV 4.1-20 Where space limitations do not allow for conventional fill compaction operations, special backfill materials and procedures may be required. Pea gravel or other select fill can be used in areas of limited space. A sand and portland cement slurry (two sacks per cubic-yard mix) shall be used in limited space areas for shallow backfill near final pad grade, and pea gravel shall be placed in deeper backfill near drainage systems.</p> <p>LV 4.1-21 The geotechnical engineer shall observe the placement of fill and conduct in-place field density tests on the compacted fill to check for adequate moisture content and the required relative compaction. Where less than specified relative compaction is indicated, additional compacting effort shall be applied and the soil moisture conditioned as necessary until adequate relative compaction is attained.</p> <p>LV 4.1-22 The Contractor shall comply with the minimum relative compaction out to the finish slope face</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>of fill slopes, buttresses, and stabilization fills as set forth in the specifications for compacted fill. This may be achieved by either overbuilding the slope and cutting back as necessary, or by direct compaction of the slope face with suitable equipment, or by any other procedure that produces the required result.</p> <p>LV 4.1-23 Any abandoned underground structures, such as cesspools, cisterns, mining shafts, tunnels, septic tanks, wells, pipelines or other structures not discovered prior to grading shall be removed or treated to the satisfaction of the <u>project's licensed soils engineer and/or the controlling agency for the project, and the engineer shall follow all applicable regulatory standards, including those established by the California Department of Oil and Gas.</u></p>	
	<p>LV 4.1-24 The Contractor shall have suitable and sufficient equipment during a particular operation to handle the volume of fill being placed. When necessary, fill placement equipment shall be shut down temporarily in order to permit proper compaction of fills, correction of deficient areas, or to facilitate required field testing.</p> <p>LV 4.1-25 The Contractor shall be responsible for the satisfactory completion of all earthwork in accordance with the project plans and specifications.</p> <p>LV 4.1-26 Trench excavations to receive backfill shall be free of trash, debris or other unsatisfactory materials prior to backfill placement, and shall be observed by the geotechnical engineer.</p> <p>LV 4.1-27 Except as stipulated herein, soils obtained from the trench excavation may be used as backfill if they are essentially free of organics and deleterious materials.</p> <p>LV 4.1-28 Rocks generated from the trench excavation not</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>exceeding 3 inches in largest dimension may be used as backfill material. However, such material shall not be placed within 12 inches of the top of the pipeline. No more than 30 percent of the backfill volume shall contain particles larger than 1 inch in diameter, and rocks shall be well mixed with finer soil.</p> <p>LV 4.1-29 Soils (other than aggregates) with a Sand Equivalent (SE) greater than or equal to 30, as determined by ASTM D 2419 Standard Test Method or at the discretion of the <u>project's licensed geotechnical engineer</u> or representative in the with field, experience may be used for bedding and shading material in the pipe zone areas. These soils are considered satisfactory for compaction by jetting procedures.</p>	
	<p>LV 4.1-30 No jetting shall occur in utility trenches within the top 2 feet of the subgrade of concrete slabs-on-grade.</p> <p>LV 4.1-31 Trench backfill other than bedding and shading shall be compacted by mechanical methods such as tamping sheepsfoot, vibrating or pneumatic rollers or other mechanical tampers to achieve the density specified herein. The backfill materials shall be brought to optimum moisture content or above, thoroughly mixed during spreading to obtain a near uniform moisture condition and uniform blend of materials, and then placed in horizontal layers with a thickness (loose) not exceeding 8 inches. Trench backfills shall be compacted to a minimum compaction of 90 percent relative to the maximum dry density determined per the latest ASTM D1557 test.</p> <p>LV 4.1-32 The contractor shall select the equipment and process to be used to achieve the specified density within a trench without damage to the pipeline, the adjacent ground, existing</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>improvements, or completed work.</p> <p>LV 4.1-33 Observations and field tests shall be carried on during construction by the <u>project's licensed geotechnical engineer</u> to confirm that the required degree of compaction within a trench has been obtained. Where compaction within a trench is less than that specified, additional compaction effort shall be made with adjustment of the moisture content as necessary until the specified compaction is obtained. Field density tests may be omitted at the discretion of the engineer or his representative in the <u>with field experience</u>.</p>	
	<p>LV 4.1-34 Whenever, in the opinion of the geotechnical engineer, an unstable condition is being created within a trench, either by cutting or filling, the work shall not proceed until an investigation has been made and the excavation plan revised, if deemed necessary.</p> <p>LV 4.1-35 Fill material within a trench shall not be placed, spread, or rolled during unfavorable weather conditions. When the work is interrupted by heavy rain, fill operations shall not be resumed until field tests by the geotechnical engineer indicate the moisture content and density of the fill are as specified.</p> <p>LV 4.1-36 Water shall never be allowed to stand or pond on building pads, nor should it be allowed to run over constructed slopes, but is to be conducted to the driveways or natural waterways via non-erodible drainage devices. In addition, it is recommended that all drainage devices be inspected periodically and be kept clear of all debris. Drainage and erosion control shall be in accordance with the standards set forth in the Los Angeles County Uniform Building Code.</p> <p>LV 4.1-37 Modification of the existing pad grades after</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>approval of Fine Grading by the project supervising civil engineer can adversely affect the drainage of the lots. Lot drainage shall not be modified by future landscaping, construction of pools, spas, walkways, garden walls, etc., unless additional remedial measures (area drains, additional grading, etc.) are in compliance with Los Angeles County Codes.</p>	
	<p>LV 4.1-38 Positive surface drainage shall be maintained away from buildings. The recommended drainage patterns shall be established at the time of Fine Grading. Roof drainage shall be collected in gutters and downspouts, which terminate at approved discharge points.</p> <p>LV 4.1-39 Permanent erosion control measures shall be initiated immediately following completion of grading.</p> <p>LV 4.1-40 All interceptor ditches, drainage terraces, down-drains and any other drainage devices shall be maintained and kept clear of debris. A qualified <u>The project's licensed civil engineer</u> shall review any proposed additions or revisions to these systems, to evaluate their impact on slope erosion.</p> <p>LV 4.1-41 Retaining walls shall have adequate freeboard to provide a catchment area for minor slope erosion. Periodic inspection, and if necessary, cleanout of deposited soil and debris shall be performed, particularly during and after periods of rainfall.</p> <p>LV 4.1-42 The future developers shall be made aware of the potential problems, which may develop when drainage is altered through landscaping and/or construction of retaining walls, and paved walkways. Poned water, water directed over slope faces, leaking irrigation systems, over-watering or other conditions that could lead to excessive soil moisture, shall be avoided.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (continued)		
	<p>LV 4.1-43 Slope surficial soils may be subject to water induced mass erosion. Therefore, a suitable proportion of slope planting shall have root systems, which will develop well below 3 feet. Drought-resistant shrubs and low trees for this purpose shall be considered. Intervening areas can then be planted with lightweight surface plants with shallower root systems. All plants shall be lightweight and require low moisture. Any loose slough generated during the process of planting shall be properly removed from the slope face(s).</p> <p>LV 4.1-44 Short-term, non-plant erosion-control measures shall be implemented during construction delays, adverse climate/weather conditions, and when plant growth rates do not permit rapid vegetation of graded areas. Examples of short-term, non-plant erosion-control measures include matting, netting, plastic sheets, deep (5 feet) staking, etc.</p> <p>LV 4.1-45 All possible precautions shall be taken to maintain a moderate and uniform soil moisture to avoid high and/or fluctuating water content in slope materials. Slope irrigation systems shall be properly operated and maintained and system controls shall be placed under strict control.</p> <p>LV 4.1-46 A program of aggressive rodent control shall be implemented to control burrowing on slope areas.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (continued)		
	<p>LV 4.1-47 Bank protection is proposed to consist of a soil cement, gunite or rip-rap liner, which is buried/concealed behind a 4:1 (h:v) fill slope. Construction of the liner will involve the excavation of a 20-foot-deep slot as shown in the details on the tentative map. Where the toe of the 4:1 slope extends beyond the removals for the slot, the alluvium shall be over-excavated 3 feet prior to placement of overlying fill.</p> <p>LV 4.1-48 Groundwater will likely be encountered between a depth of 5 and 10 feet; therefore dewatering shall be undertaken to complete the lower 10 to 15 feet of the proposed slot excavation.</p> <p>LV 4.1-49 All final grades shall be sloped away from the building foundations to allow rapid removal of surface water runoff. No ponding of water shall be allowed adjacent to the foundations. Plants and other landscape vegetation requiring excessive watering shall be avoided adjacent to the building foundations. Should landscaping be constructed, an effective water-tight barrier shall be provided to prevent water from affecting the building foundations.</p> <p>LV 4.1-50 Future structures shall be designed according to standards applicable to Seismic Zone 4 of the Uniform Building Code.</p> <p>LV 4.1-51 Lots underlain by transitions between different material types (e.g., bedrock to fill, bedrock to alluvium, etc.) shall be over-excavated 5 feet to minimize potential adverse impacts associated with differential materials response.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (continued)		
	<p>LV 4.1-52 Overexcavation of clay-rich bedding planes of the Saugus Formation or Pico Formation and subsequent placement of a certified fill cap is recommended to mitigate potential hazards from expansive material, and to reduce potential hazards from potential secondary seismogenic movement along bedding planes.</p> <p>LV 4.1-53 Stability Fills shall be analyzed at the grading plan stage based on testing of the actual materials proposed for the fill.</p> <p>LV 4.1-54 Most of the alluvium and older Alluvium on the site are coarse-grained and have low cohesion. These materials shall not be used within the outer 4 feet of fill slopes and Stability Fills.</p> <p>LV 4.1-55 Excavations deeper than 3 feet shall conform to safety requirements for excavations as set forth in the State Construction Safety Orders enforced by the California Occupational Health and Safety Administration (CAL OSHA). Temporary excavations no higher than 12 feet shall be no steeper than 1:1 (h:v). For excavations to 20 feet in height, the bottom 3.5 feet may be vertical and the upper portion between 3.5 and 20 feet shall be no steeper than 1.5:1 (h:v). Excavations not complying with these requirements shall be shored. It is strongly recommended that excavation walls in sands and dry soils be kept moist, but not saturated at all times.</p> <p>LV 4.1-56 Parameters for design of cantilever and braced shoring shall be provided at the grading plan stage.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (continued)		
	<p>LV 4.1-57 The bases of excavations or trenches shall be firm and unyielding prior to foundations or utility construction. On-site materials other than topsoil or soils with roots or deleterious materials may be used for backfilling excavations. Densification (compaction) by jetting may be used for on-site clean sands or imported equivalent of coarser sand provided they have a Sand Equivalent greater than or equal to 30 as determined by ASTM D2419 test method. Recommended specifications for placement of trench backfill are presented in Appendix C of the September 27, 2000 geologic and geotechnical report.</p> <p>LV 4.1-58 The structural design shall include seismic geotechnical parameters in accordance with Uniform Building Code (UBC) requirements for Seismic Zone 4. These parameters shall be provided at the grading plan stage.</p> <p>LV 4.1-59 Shallow spread footings for foundation support of up to three-story residential, commercial or light industrial developments can adequately be derived from non-organic native soils, processed as necessary, and bedrock or engineered fill compacted as previously recommended. The composition of footings for heavier structures, if applicable, shall be addressed at the grading plan stage. Tentatively, an allowable bearing capacity of 2,500 pounds per square foot can be used for shallow foundations constructed in certified compacted fill originated from existing, near-surface soils (except vegetative soils). Lateral resistance of footing walls shall be provided at the grading plan stage.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (continued)		
	<p>LV 4.1-60 Figure C4 (Appendix C), “Cut Lot (Transitional)” and “Cut-Fill Lot (Transitional)” of the September 27, 2000, geologic and geotechnical report provides a foundation grading detail for locations where foundations will straddle transition zones between cut and fill materials. If the remaining cut-fill transition is steep at depth below the building area, the geometry of the transition shall be reviewed during grading operations by the soils engineer on a site-specific basis to evaluate the need for additional over-excavation removals and/or additional foundation reinforcement. Based on this review, appropriate action shall be taken as deemed necessary by the engineer. As a general guideline, steep cut/fill transitions would include slope gradients steeper than 4:1 (h:v) and overall variations in fill thickness of greater than 15 feet, which occur within 20 feet of final pad grade. Transitions between differing material types, such as bedrock and alluvium, also shall be over-excavated 5 feet as recommended in Section 1.2 of Appendix E of the September 27, 2000 Geologic and Geotechnical Report.</p> <p>LV 4.1-61 To minimize significant settlements, upper soils in areas to receive fills shall be removed and recompacted to competent materials. Specific foundation design loads shall be provided at the grading plan stage.</p> <p>LV 4.1-62 Whenever seepage of groundwater is observed, the condition shall be evaluated by the engineering geologist and geotechnical engineer prior to covering with fill material.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (continued)		
	<p>LV 4.1-63 Surface drainage control design shall include provisions for positive surface gradients to ensure that surface runoff is not permitted to pond, particularly above slopes or adjacent to building foundations or slabs. Surface runoff shall be directed away from slopes and foundations and collected in lined ditches or drainage swales, via non-erodible drainage devices, which is to discharge to paved roadways, or existing watercourses. If these facilities discharge onto natural ground, means shall be provided to control erosion and to create sheet flow.</p> <p>LV 4.1-64 Fill slopes and stability fills, as applicable, shall be provided with subsurface drainage as necessary for stability.</p> <p>LV 4.1-65 Additional testing for expansive soils shall be performed at the grading plan stage and during finish grading so that appropriate foundation design recommendations for expansive soils, if applicable, can be made.</p> <p>LV 4.1-66 Testing for soil corrosivity shall be undertaken at additional locations within the project site at the grading plan stage. Final recommendations for concrete shall be in accordance with the latest UBC requirements, and a corrosion specialist shall provide mitigating recommendations for potential corrosion of metals.</p> <p>LV 4.1-67 Preliminary retaining wall geotechnical design parameters and pavement design(s) shall be provided at the grading plan stage.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (continued)		
	<p>LV 4.1-68 If the proposed fills over alluvium and slopewash at either the Adobe Canyon or Chiquito Canyon sites are to be considered "structural fill," subsurface studies shall be performed to determine actual liquefaction potential of these soils. If this potential exists, it shall be addressed by removal and recompaction of the alluvium above groundwater, in order to provide a cap to bridge effects.</p> <p>LV 4.1-69 Where possible, removals that impact the mapped landslides shall be completed so as to not remove the existing landslide stability. If this is not possible, the conditions shall be geotechnically evaluated on a case-by-case basis at the Grading Plan stage in order to safely complete the necessary removals.</p> <p>LV 4.1-70 Slope stability analysis shall be performed for the 186-foot-high cut slope along the base of the existing Edison tower within the Chiquito Canyon grading site. Corrective measures, such as construction of a buttress or stability fills, shall be implemented if the proposed cut slope does not comply with the required minimum factor of safety.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (continued)		
	<p>LV 4.1-71 If future development is proposed within either Adobe Canyon or Chiquito Canyon, subsurface exploration and analyses shall be conducted to determine landslide stability. Means to mitigate the potential effects of landslides, including complete or partial removal, buttressing, avoidance, or building setbacks shall be identified at that time.</p> <p>LV 4.1-72 If future development is proposed within Chiquito Canyon, slope stability analysis shall be performed for the 186-foot-high cut slope along the base of the existing Edison tower within the Chiquito Canyon grading site. Corrective measures, such as construction of a buttress or stability fills, shall be implemented if the proposed cut slope does not comply with the required minimum factor of safety.</p>	
4.2 HYDROLOGY		
<p>Site clearing and grading operations within the Landmark Village tract map site would have the potential to discharge sediment in the Santa Clara River during storm events. Temporary erosion control measures in disturbed areas of the project site during the construction phase (including grading in Adobe Canyon and Chiquito Canyon, and construction of the utility corridor) are recommended to reduce this potential impact to less than significant levels. Once developed, the Landmark Village project would reduce post-development stormwater flows during a capital storm event, as compared to existing conditions. Specifically, the amount of discharge from the <u>Landmark Village project site (including the Chiquito Canyon watershed and other tributary watersheds upstream from the Landmark Village project site in which the project site lies)</u> would decrease from 831 cubic feet per second (cfs) to 795 cfs. This 4 percent reduction in rainfall runoff would be due to the reduction in erosive areas on the project site that contribute sediment and debris to the runoff, as well as to one existing and three proposed upstream debris basins north of State</p>	<p>Please refer to 4.3, Water Quality, of this summary table for a listing of Program EIR mitigation measures pertaining to hydrology.</p> <p>LV 4.2-1 The on-site storm drains (pipes and reinforced concrete boxes) and open channels shall be designed and constructed for either the 25-year or 50-year capital storm.</p> <p>LV 4.2-2 Debris basins shall be constructed pursuant to LACDPW requirements to intercept flows from undeveloped areas entering into the developed portions of the site.</p> <p>LV 4.2-3 Energy dissipaters consisting of either rip-rap or larger standard impact type energy dissipaters shall be installed as required by LACDPW at outlet locations to reduce velocities of runoff into the channel where necessary to prevent erosion.</p> <p>LV 4.2-4 The project is required to comply with the</p>	<p>With implementation of the identified mitigation measures, the proposed project's hydrology impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p>

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<p>Route 126 (SR-126). The proposed storm drainage improvements would meet the flood control requirements of the Flood Control and Watershed Management Divisions of the Los Angeles County (County) Department of Public Works (LACDPW) and reduce flood impacts to less than significant levels.</p>	<p>RWQCB Municipal Permit (General MS4 Permit) Order No. R4-2006-0074, National Pollutant Discharge Elimination System (NPDES) No. CAS004001 (amended September 14, 2006), and with the state’s General Construction Activity Storm Water Permit, California State Water Resources Control Board Order No. 99-08-DWQ, NPDES No. CAS000002, reissued on August 19, 1999, as amended and further modified by Resolution No. 2001-046 on April 26, 2001.</p> <p><i>(Since release of the Draft EIR, this permit has been reissued. This mitigation has been revised to reflect the most current permit dates).</i></p>	
<p><u>The Adobe Canyon borrow site is south of the Santa Clara River and in a separate watershed from the Landmark Village tract map site; therefore, it is analyzed separately.</u> Discharge from the Adobe Canyon borrow site after grading would be reduced from 450 to 352 cfs during a capital storm event, which represents a 22 percent reduction. Discharge from the Chiquito Canyon grading site after grading would be reduced from 283 cfs to 197 cfs, which is a 30 percent reduction. These reductions in discharge would result from a reduced rate of runoff from the grading sites allowing for greater infiltration. They would also result from the proposed debris basins that would capture sediment and debris in runoff before it discharges to the river. As a result of the grading and the debris basins, discharge from the off-site grading areas would not result in downstream flooding or an exceedance of river capacity, and impacts relative to upstream and/or downstream flooding would be less than significant. Discharge and debris flow from the utility corridor would be equal to or less than that under existing conditions.</p> <p>Approximately 169 acres of the Landmark Village tract map site would be elevated above the capital floodplain (<i>the remaining portions of the tract map site are already above the capital floodplain</i>) and, therefore, none of the improvements proposed on the tract map site would be subject to flood hazard from the</p>	<p>LV 4.2-5 During all construction phases, temporary erosion control shall be implemented to retain soil and sediment on the tract map site, within the Adobe Canyon borrow site, the Chiquito Canyon grading site, the utility corridor right-of-way, and the bank stabilization areas, as follows:</p> <ul style="list-style-type: none"> • Re-vegetate exposed areas as quickly as possible; • Minimize disturbed areas; • Divert runoff from downstream drainages with earth dikes, temporary drains, slope drains, etc.; • Reduce velocity through outlet protection, check dams, and slope roughening/terracing; • Implement dust control measures, such as sand fences, watering, etc.; • Stabilize all disturbed areas with blankets, reinforced channel liners, soil cement, fiber matrices, geotextiles, and/or other erosion resistant soil coverings or treatments; • Stabilize construction entrances/exits with 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<p>river or other nearby drainages. <i>Neither the Adobe Canyon borrow site nor the Chiquito Canyon grading site include proposed structures within a 100-year or capital flood hazard area. By elevating the project site above the 100-year and capital flood hazard areas and by providing bank protection and erosion protection where necessary, no housing or structures would be exposed to flood hazards.</i></p> <p>The proposed project would not result in risk of loss, injury, or death due to flooding, mudflow, tsunami, or seiche.</p> <p>Project water quality impacts are discussed in this EIR in Section 4.3, Water Quality. Project impacts on biological resources in the Santa Clara River as a result of changes to river hydraulics associated with proposed site grading, bank stabilization, and other floodplain modifications are addressed in this EIR in Section 4.5, Floodplain Modifications.</p>	<p>aggregate underdrain with filter cloth or other comparable method;</p>	
	<p>LV 4.2-5 (continued)</p> <ul style="list-style-type: none"> • Place sediment control best management practices (BMPs) at appropriate locations along the site perimeter and at all operational internal inlets to the storm drain system at all times during the rainy season (sediment control BMPs may include filtration devices and barriers, such as fiber rolls, silt fence, straw bale barriers, and gravel inlet filters, and/or with settling devices, such as sediment traps or basins); and/or • Eliminate or reduce, to the extent feasible, non-stormwater discharges (e.g., pipe flushing, and fire hydrant flushing, over-watering during dust control, vehicle and equipment wash down) from the construction site through the use of appropriate sediment control BMPs. 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.2 HYDROLOGY (continued)		
	<p>LV 4.2-6 All necessary permits, agreements, letters of exemption from the Army Corps of Engineers (ACOE) and/or the California Department of Fish and Game (CDFG) for project-related development within their respective jurisdictions must be obtained prior to the issuance of grading permits.</p> <p>LV 4.2-7 By October 1st of each year, a separate erosion control plan for construction activities shall be submitted to the local municipality describing the erosion control measures that will be implemented during the rainy season (October 1 through April 15).</p>	
	<p>LV 4.2-8 A final developed condition hydrology analysis shall be prepared in conjunction with final project design when precise engineering occurs. This final analysis shall confirm that the final project design is consistent with this analysis. This final developed condition hydrology analysis shall confirm that the sizing and design of the water quality and hydrologic control BMPs control hydromodification impacts in accordance with the NSRP Sub-Regional Stormwater Mitigation Plan. All elements of the storm drain system shall conform to the policies and standards of the LACDPW, Flood Control Division, as applicable.</p> <p>LV 4.2-9 Ultimate project hydrology and debris production calculations shall be prepared by a project engineer to verify the requirements for debris basins and/or desilting inlets.</p> <p>LV 4.2-10 To reduce debris being discharged from the site, debris basins shall be designed and constructed pursuant to LACDPW Flood Control to intercept flows from undeveloped areas entering into the developed portions of the site.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 WATER QUALITY		
<p><u>This section has been revised to reflect a LID Performance Standard that has been adopted for the Project in response to comments received. The revised analysis presented herein is based on the Project’s vesting tentative tract map, revised as of April 2010. Please see Topical Response 12: Revised Project Design for the revised analysis to other sections of this EIR. The revised or additional text is shown in double-underline; deleted text is shown in strikeout. Revised or new figures or tables (if applicable) are indicated by the addition of the following text to the figure or table title: (Revised) or (New).</u></p> <p><u>This section is based on the revised Landmark Village Water Quality Technical Report and related appendices, prepared by Geosyntec Consultants (September 2011) , and the “Landmark Village Draft Recirculated EIR Response to Comments, Topical Response 14: Water Quality” prepared by Geosyntec Consultants (2011). A copy of the Landmark Village Water Quality Technical Report is included in Appendix 4.3 of this Recirculated EIR. In addition, various materials and documents were used or referenced in connection with the preparation of this section. The documents are available for public review at the County of Los Angeles Department of Regional Planning and are incorporated by this reference. The report and this section focus on potential water quality impacts. For analysis of the potential hydrological impacts of the proposed project, please see Section 4.2, Hydrology.</u></p> <p>The Landmark Village tract map site is presently under agricultural cultivation, and runoff is channeled via agricultural ditches to ultimately discharge into the river. Construction and operation of the Landmark Village project would replace agricultural runoff with urban runoff. The following summarizes the impacts of the pollutants of concern under wet- and dry-weather conditions in the post-developed conditions:</p> <ul style="list-style-type: none"> • Sediments: Municipal Separate Storm Sewer System (MS4) Permit, General Construction Permit, Dewatering General Permit, and Standard Urban Stormwater Mitigation Plan (SUSMP), <u>and Low Impact Development</u> 	<p>SP 4.2-1 All on- and off-site flood control improvements necessary to serve the Newhall Ranch Specific Plan are to be constructed to the satisfaction of the County of Los Angeles Department of Public Works Flood Control Division.</p> <p>SP 4.2-2 All necessary permits or letters of exemption from the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game, and the Regional Water Quality Control Board (RWQCB) for Specific Plan-related development are to be obtained prior to construction of drainage improvements. The performance criteria to be used in conjunction with 1603 agreements and/or 404 permits are described in Section 4.4, Biota, Mitigation Measures 4.4-1 through 4.4-10 (restoration) and 4.4-11 through 4.4-16 (enhancement).</p> <p>SP 4.2-3 All necessary streambed agreement(s) are to be obtained from the California Department of Fish and Game wherever grading activities alter the flow of streams under CDFG jurisdiction. The performance criteria to be used in conjunction with 1603 agreements and/or 404 permits are described in Section 4.4, Biota, Mitigation Measures 4.4-1 through 4.4-10 (restoration) and 4.4-11 through 4.4-16 (enhancement).</p> <p>SP 4.2-4 Conditional Letters of Map Revision (LOMR) relative to adjustments to the 100-year FIA flood plain are to be obtained by the applicant after the proposed drainage facilities are constructed.</p>	<p>With implementation of the identified mitigation measures, the proposed project’s water quality impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p>

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<p>(LID)-compliant BMPs would be incorporated into the project to address sediment in both the construction phase and post-development. Mean total suspended solids concentration and load are predicted to be less in the post-development condition than under existing conditions. Turbidity in stormwater runoff would be controlled through implementation of a Construction Storm Water Pollution Prevention Plan (SWPPP) and would be permanently reduced through the stabilization of erodible soils with development. On this basis, the impact of the project on sediments is considered less than significant.</p>		
<ul style="list-style-type: none"> <p>Nutrients (Phosphorus and Nitrogen [Nitrate+Nitrite-N Ammonia-N, and Total Nitrogen]): MS4 Permit, General Construction Permit, Dewatering General Permit, and SUSMP, <u>and LID-compliant BMPs</u> would be incorporated into the project to address nutrients in both the construction phase and post-development. Total Phosphorus, nitrate-nitrogen plus nitrite-nitrogen, ammonia-nitrogen and total nitrogen concentrations and loads are predicted to decrease in the post-developed condition and be within the range of observed values in Santa Clara River Reach 5. Nitrate-N plus nitrite-N and ammonia-N concentrations are predicted to decrease with development to a point well below the Los Angeles RWQCB Basin Plan’s objectives and total maximum daily load (TDML) wasteload allocations. The predicted total nutrient concentrations are not expected to cause increased algal growth. On this basis, the impact of the project on nutrients is considered less than significant.</p> <p>Trace Metals: MS4 Permit, General Construction Permit, General Dewatering Permit, and SUSMP, <u>and LID-compliant BMPs</u> will be incorporated into the project to address trace metals in both the construction phase and post-development. The mean <u>annual loads and concentrations</u> of dissolved copper, total lead, dissolved zinc, and total aluminum concentration are predicted to decrease with project development. Although total aluminum loads are predicted to increase with</p> 	<p>SP 4.2-5 Prior to the approval and recordation of each subdivision map, a Hydrology Plan, Drainage Plan, and Grading Plan (including an Erosion Control Plan if required) for each subdivision must be prepared by the applicant of the subdivision map to ensure that no significant erosion, sedimentation, or flooding impacts would occur during or after site development. These plans shall be prepared to the satisfaction of the County of Los Angeles Department of Public Works.</p> <p>SP 4.2-6 Install permanent erosion control measures, such as desilting and debris basins, drainage swales, slope drains, storm drain inlet/outlet protection, and sediment traps in order to prevent sediment and debris from the upper reaches of the drainage areas which occur on the Newhall Ranch site from entering storm drainage improvements. These erosion control measures shall be installed to the satisfaction of the County of Los Angeles Department of Public Works.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<p>development, mMean concentrations of dissolved copper, total lead, dissolved zinc, and total aluminum are predicted to be below benchmark Basin Plan objectives, California Toxics Rule (CTR) criteria, and the National Ambient Water Quality Criteria (NAWQC) criterion for aluminum. Cadmium is not expected to be present in runoff discharges from the project. On this basis, the impact of the project</p>		

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 WATER QUALITY (continued)		
<ul style="list-style-type: none"> (cont'd) on trace metals is considered less than significant. Chloride: MS4 Permit, Construction General Permit, Dewatering General Permit, and <u>SUSMP, and LID</u>-compliant BMPs would be incorporated into the project to address chloride in both the construction phase and post-development. The mean concentration of chloride would decrease with development, while the average annual load would increase slightly. The predicted concentration is well below the Los Angeles Basin Plan objective and is within the range of observed values in Santa Clara River Reach 5. Chloride is not a pollutant of concern in construction-related runoff. On this basis, the impact of the project on chloride is considered less than significant. Pesticides: Pesticides in runoff may or may not increase with development as a result of landscape applications. Proposed pesticide management practices, including source control, removal with sediments in treatment control <u>LID</u> BMPs, and advanced irrigation controls would minimize the presence of pesticides in runoff. During the construction phase of the project, erosion, and sediment control BMPs and source controls implemented per general Permit and general De-Watering Permit requirements would prevent pesticides associated with sediment from being discharged. Final site stabilization would limit mobility of legacy pesticides that may be present in pre-development conditions. On this basis, the impact of pesticides is considered less than significant. 	<p>SP 4.2-7 The applicant for any subdivision map permitting construction shall satisfy all applicable requirements of the NPDES Program in effect in Los Angeles County to the satisfaction of the County of Los Angeles Department of Public Works. These requirements currently include preparation of an Urban Storm Water Mitigation Plan (USWMP) containing design features and Best Management Practices (BMPs) appropriate and applicable to the subdivision. In addition, the requirements currently include preparation of a Storm Water Management Pollution Prevention Plan (SWPPP) containing design features and BMPs appropriate and applicable to the subdivision. The County of Los Angeles Department of Public Works shall monitor compliance with those NPDES requirements.</p> <p>LV 4.3-1 Prior to issuance of a building permit, and as a part of the design level hydrology study and facilities plan, the project applicant shall submit to LACDPW for review and approval of drainage plans showing the incorporation into the project of those water quality and hydrologic control project design features (i.e., the post-development water quality and hydrologic control BMPs) (the "PDFs"), identified in Section 4.3, which PDFs shall be designed to meet the standards set forth in Section 4.3, including the sizing, capacity, and volume reduction performance standards set forth herein, all as summarized in Table 4.3-178.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 WATER QUALITY (continued)		
<ul style="list-style-type: none"> Pathogens: Post-development pathogen sources include both natural and anthropogenic sources. The natural sources include bird and mammal excrement. Anthropogenic sources include leaking septic and sewer systems and pet wastes. The project would not include septic systems and the sewer system would be designed to current standards, minimizing the potential for leaks. Thus, pet wastes are the primary source of concern. Pathogens are not expected to occur at elevated levels during the construction phase of the project. The Project Design Features (PDFs) would include source controls and treatment controls, which in combination should reduce pathogen indicator levels in post-development stormwater runoff. On this basis, the project’s impact on pathogen and pathogen indicators is considered less than significant. Hydrocarbons: Hydrocarbon concentrations would likely increase with development because of vehicular emissions and leaks. In stormwater runoff, hydrocarbons are often associated with soot particles that can combine with other solids in the runoff. Such materials are subject to treatment in the proposed infiltration basins and vegetated swales LID BMPs. Source control BMPs incorporated in compliance with the MS4 Permit, the General Construction <u>General</u> Permit, and the SUSMP also would minimize the presence of hydrocarbons in runoff. During the construction phase of the project, pursuant to the General Construction <u>General</u> Permit, the Construction Stormwater Pollution Prevention Plan must include BMPs that address proper handling of petroleum products on the construction site, such as proper petroleum product storage and spill response practices, and those BMPs must effectively prevent the release of hydrocarbons to runoff per the Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology (BAT/BCT) standards. On this basis, the impact of the project on hydrocarbons is considered less than significant. 	<p>LV 4.3-2</p> <p>Prior to issuance of a building permit, and as a part of the design level hydrology study and facilities plan, the project applicant shall submit to planning staff for review a Landscape and Integrated Pest Management Plan, identified in Section 4.3, which shall be designed to meet the standards set forth as follows.</p> <p>A Landscape and Integrated Pest Management Plan shall be developed and implemented for common area landscaping within the Landmark Village Project that addresses integrated pest management (IPM) and pesticide and fertilizer application guidelines. IPM is a strategy that focuses on long-term prevention or suppression of pest problems (i.e., insects, diseases and weeds) through a combination of techniques including: using pest-resistant plants; biological controls; cultural practices; habitat modification; and the judicious use of pesticides according to treatment thresholds, when monitoring indicates pesticides are needed because pest populations exceed established thresholds. The Landscape and Integrated Pest Management Plan will address the following components:</p> <ol style="list-style-type: none"> 1. Pest identification. 2. Practices to prevent pest incidence and reduce pest buildup. 3. Monitoring to examine vegetation and surrounding areas for pests to evaluate trends and to identify when controls are needed. 4. Establishment of action thresholds that trigger control actions. 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 WATER QUALITY (continued)		
<ul style="list-style-type: none"> Trash and Debris: Trash and debris in runoff would likely increase with development. However, the project PDFs, including source control and treatment-<u>LID</u> BMPs incorporated in compliance with the MS4 Permit and the SUSMP, <u>and LID</u> requirements would minimize the adverse impacts of trash and debris. Source controls such as street sweeping, public education, fines for littering, covered trash receptacles and storm drain stenciling are effective in reducing the amount of trash and debris that is available for mobilization during wet weather. Trash and debris would be captured in catch basin inserts in the commercial area parking lot and in the treatment-control <u>LID</u> PDFs. During the construction phase of the project, PDFs implemented per <u>Construction</u> General Permit and <u>General-De-Watering</u> General Permit requirements would remove trash and debris through the use of BMPs such as catch basin inserts and by general good housekeeping practices. Trash and debris are not expected to significantly impact receiving waters due to the implementation of the project PDFs. 	<ol style="list-style-type: none"> Pest control methods - cultural, mechanical, environmental, biological, and appropriate pesticides. Pesticide management - safety (<i>e.g.</i>, Material Safety Data Sheets, precautionary statements, protective equipment); regulatory requirements; spill mitigation; groundwater and surface water protection measures associated with pesticide use; and pesticide applicator certifications, licenses, and training (<i>i.e.</i>, all pesticide applicators must be certified by the California Department of Pesticide Regulation). Fertilizer management - soil assessment, fertilizer types, application methods, and storage and handling. 	
<ul style="list-style-type: none"> Methylene Blue Activated Substances (MBAS): The presence of soap in runoff from the project would be controlled through source control PDFs, including a public education program on residential and charity car washing and the provision of a centralized car wash area directed to the sanitary sewer in the multi-family residential areas. Project source control PDFs will reduce the impacts of soaps in post-construction runoff. Other sources of MBAS, such as cross connections between sanitary and storm sewers, are unlikely given modern sanitary sewer installation methods and inspection and maintenance practices. During the construction phase of the project, equipment and vehicle washing would not use soaps or any other MBAS sources. Therefore, MBAS are not expected to significantly impact the receiving waters of the proposed project. Cyanide: In addition to the expected relative low level of 		

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<p>cyanide in untreated stormwater, cyanide in runoff from the project would be readily removed by biological uptake, degradation by microorganisms, and by volatilization in the treatment-LID PDFs. Therefore, cyanide is not expected to significantly impact the receiving waters of the proposed project.</p> <ul style="list-style-type: none"> Bioaccumulation: According to scientific literature, the primary pollutants that are of concern with regard to bioaccumulation are mercury and selenium. However, selenium and mercury are not of concern in this watershed, so bioaccumulation of selenium and mercury also is not expected to occur either during the construction or post-development project phases. On this basis, the potential for bioaccumulation in the Santa Clara River and adverse effects on waterfowl and other species is considered less than significant. 		

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 WATER QUALITY (continued)		
<ul style="list-style-type: none"> Construction Impacts: Construction impacts on water quality generally are caused by soil disturbance and subsequent suspended solids discharge, or by discharge of certain non-sediment-related pollutants, including construction materials (e.g., paint, stucco, etc); chemicals, liquid products, and petroleum products used in building construction or the maintenance of heavy equipment; and concrete-related pollutants.. These impacts will be minimized through implementation of construction BMPs that would meet or exceed measures required by the Construction General Permit, as well as BMPs that control the other potential construction-related pollutants (e.g., petroleum hydrocarbons and metals). A SWPPP specifying BMPs, for the site that meet or exceed BAT/BCT standards would be developed as required by, and in compliance with, the Construction General Permit and Los Angeles County Standard Conditions. Erosion control BMPs, including but not limited to hydro-mulch, erosion control blankets, stockpile stabilization, and other physical soil stabilization techniques, also would be implemented to prevent erosion, whereas sediment controls, including but not limited to silt fencing, sedimentation ponds and secondary containment on stockpiles, would be implemented to trap sediment and prevent discharge. Non-stormwater and construction waste and materials management BMPs (such as vehicle and equipment fueling and washing BMPs, nonvisible pollutant monitoring; and BMPs to manage materials, products, and solid, sanitary, concrete, hazardous, and hydrocarbon wastes) also would be deployed to protect construction site runoff quality. On this basis, the construction-related impact of the project on water quality is considered less than significant. 		

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 WATER QUALITY (continued)		
<ul style="list-style-type: none"> Regulatory Requirements: The proposed project satisfies MS4 Permit requirements for new development, including SUSMP and LID requirements and Stormwater Quality Management Program (SQMP) requirements, and satisfies construction-related requirements of the General Construction Permit and General Dewatering Permit. Therefore, the project would comply with water quality regulatory requirements applicable to stormwater runoff. <p>Finally, the proposed Landmark Village project, including proposed drainage and hydromodification controls, would not substantially alter the existing drainage pattern of the Santa Clara River in a manner that would cause substantial erosion, siltation, or channel instability; or substantially increase the rates, velocities, frequencies, duration, and/or seasonality of flows in a manner that causes channel instability or in a manner that harms sensitive habitats or species in the River. Therefore, the impact of the project on hydromodification is considered less than significant.</p>		

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA		
<p>The Landmark Village project, including the necessary off-site project components, would result in the permanent conversion of, or temporary disturbance to, 428 acres of land currently used for agricultural purposes, 53 acres of California annual grassland, 23.4 acres of coast live oak woodland, 47 acres of undifferentiated chaparral, 1.2 acres of chamise chaparral, 13 acres of mulefat scrub (including disturbed), 32 acres of southern cottonwood-willow riparian, 184.3 acres of coastal scrub, 3.8 acres of southern willow scrub, 15 acres of river wash, 0.5 acre of alluvial scrub, 13 acres of big sagebrush scrub alliances, 0.6 acre of southern coast live oak riparian forest, 7.0 acres of arrow weed scrub, 3.5 acre of herbaceous wetland, 11 acres of developed land, and 249 acres of disturbed land. <u>The entire project site occupies 1,063.2 acres, including the 292.6-acre Landmark Village tract map site and an additional 770.6 acres of off-site land primarily within the boundaries of the approved Specific Plan. The project site includes 87.9 acres of riparian vegetation, including 32.1 acres of riparian woodland (southern coast live oak riparian forest and southern cottonwood-willow riparian) and 55.8 acres of other riparian vegetation communities. The project site includes 975.3 acres of upland vegetation communities and land covers, of which 778.5 acres occur outside the 100 year floodplain. The project site includes 1.4 mile of the Santa Clara River mainstem; this represents 1.6 percent of the overall Santa Clara River mainstem (86 miles). The total Landmark Village project area inclusive of infrastructure improvements, includes approximately 5 miles of the Santa Clara River mainstem (6 percent of overall).</u></p> <p><u>Consistent with the findings of the Newhall Ranch Specific Plan Program EIR, development of the proposed project would limit northern access to or conveyance from the Santa Clara River for wildlife moving through the area. However, given that the tract map site is currently used for agriculture and is frequently devoid of cover, the Landmark Village tract map site is not expected to be a substantial part of a currently</u></p>	<p>SP 4.6-1 The restoration mitigation areas located within the River Corridor SMA shall be in areas that have been disturbed by previous uses or activities. Mitigation shall be conducted only on sites where soils, hydrology, and microclimate conditions are suitable for riparian habitat. First priority will be given to those restorable areas that occur adjacent to existing patches (areas) of native habitat that support sensitive species, particularly Endangered or Threatened species. The goal is to increase habitat patch size and connectivity with other existing habitat patches while restoring habitat values that will benefit sensitive species. <i>(This measure is implemented primarily through LV 4.4-1 and the development of a Comprehensive Mitigation Implementation Plan (CMIP) for the Newhall Ranch Specific Plan, of which the Landmark Village project is the first subdivision. Mitigation measure LV 4.4-29 provides the replacement ratios for vegetation restoration and measure LV 4.4-30 designates the location priorities for revegetation efforts.)</i></p> <p>SP 4.6-2 A qualified biologist shall prepare or review revegetation plans. The biologist shall also monitor the restoration effort from its inception through the establishment phase. <i>(This measure will be implemented through the applicant contracting with a biological consulting company acceptable to the County to prepare the revegetation plans for the Landmark Village project.)</i></p>	<p>Consistent with the findings of the Newhall Ranch Specific Plan Program EIR, significant unavoidable impacts would occur with respect to the loss of sensitive animal species, loss of coastal sage scrub, the overall loss of wildlife habitat and increased human and domestic animal presence.</p>

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<p><u>functioning regional north south wildlife movement corridor.</u></p> <p><u>Further, the conceptual regional open space connectivity identified by Penrod et al. (2006, Recirculated Draft EIR, Appendix 4.4) that provides for landscape scale habitat connectivity between the Santa Susana Mountains to the south and the Los Padres National Forest to the north encompasses the High Country SMA/SEA 20 and the Salt Creek area and the Santa Clara River west of Landmark Village. The High Country SMA/SEA 20 and Salt Creek area comprise an important part of the least cost path linkage design identified by Penrod et al. (2006, Recirculated Draft EIR, Appendix 4.4). They provide a key part of the east-west linkage that crosses I 5 and connects to the Angeles National Forest in the San Gabriel Mountains to the east and to Ventura County SOAR open space to the southwest. They also provide a significant part of the north-south linkage between the Santa Susana Mountains and the "Fillmore Greenbel" to the northwest that further links to the Los Padres National Forest and the Angeles National Forest to the north.</u></p> <p><u>In approving the Specific Plan and Conditional Use Permit No. 94-087-(5), the Board of Supervisors found that the Specific Plan contained sufficient natural vegetative cover and open space to buffer critical resources in the River Corridor SMA/SEA 23 from the development shown in the Specific Plan. The Board of Supervisors further found that the Specific Plan incorporated extensive buffer areas to protect critical resources within the Santa Clara River. The Specific Plan's adopted Resource Management Plan requires a minimum 100-foot-wide setback adjacent to the Santa Clara River between (a) the river side of the top of bank stabilization and (b) development within certain specified land use designations (including those of the Landmark Village project site). This requirement may be modified if the Planning Director, in consultation with the County staff biologist, determines that a smaller buffer would adequately protect the riparian resources within the River Corridor SMA/SEA 23, or that a 100-foot-wide setback is infeasible for physical infrastructure planning. Again, these buffer criteria are consistent with the Buffer Study (Impact</u></p>		

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<p><u>Sciences 1997) and CDFG recommendations described above.</u></p> <p>Significant impacts would occur with respect to herbaceous wetlands, river wash, alluvial scrub, arrow weed scrub, big sagebrush scrub, mulefat scrub, southern willow scrub, southern cottonwood-willow riparian, southern coast live oak riparian, coastal scrub and alliances/associations, coast live oak woodland, wildlife habitat, special-status birds and other non-avian special-status wildlife species, special-status plant species, and protected oaks. These impacts would further affect California Department of Fish and Game (CDFG) and U.S. Army Corps of Engineers (Corps) jurisdictional resources. Significant indirect impacts would occur as a result of increased light and glare, increased non-native plant species, and increased human and domestic animal presence.</p> <p><u>The direct and indirect impacts associated with development and operation of the Landmark Village project are consistent with the findings of the Newhall Ranch Specific Plan Program EIR (March 1999) and Revised Additional Analysis (May 2003). Implementation of the mitigation measures required by the Newhall Ranch Specific Plan Program EIR and the Specific Plan Resource Management Plan (RMP), as well as the additional mitigation measures required by this EIR, would mitigate project-specific impacts to less than significant levels. Due to the incorporation of additional mitigation measures required by this EIR, those project-level impacts identified in the Newhall Ranch Specific Plan Program EIR as significant and unavoidable (i.e., loss of sensitive animal species, coastal sage scrub, and wildlife habitat, and the increase in human and domestic animal presence) would be mitigated to less than significant. The proposed Landmark Village project would contribute toward the cumulative impacts to biological resources. Landmark’s contribution to these impacts, however, can be reduced to a less than significant level through mitigation.</u></p> <p>The direct and indirect impacts associated with development and operation of the Landmark Village project either are consistent with the findings of the Newhall Ranch Specific Plan Program EIR (Impact Sciences, Inc. March 1999) and Revised</p>		

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
Additional Analysis (Impact Sciences, Inc. May 2003) or, with the inclusion of newly proposed mitigation measures, have been reduced to a level of less than significant.		

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>SP 4.6-3 Revegetation Plans may be prepared as part of a California Department of Fish and Game 1603 Streambed Alteration Agreement and/or an U.S. Army Corps of Engineers Section 404 Permit, and shall include:</p> <ul style="list-style-type: none"> • Input from both the Project proponent and resource agencies to assure that the Project objectives applicable to the River Corridor SMA and the criteria of this RMP are met. • The identification of restoration/mitigation sites to be used. This effort shall involve an analysis of the suitability of potential sites to support the desired habitat, including a description of the existing conditions at the site(s) and such base line data information deemed necessary by the permitting agency. <p><i>(This measure will be implemented for the Landmark Village project through compliance with the master 1602 Streambed Alteration Agreement and the Section 404 Permit processed by the Newhall Ranch Company associated with the 2009 Final EIS/EIR for the Newhall Ranch RMDP/SCP project.)</i></p>	
	<p>SP 4.6-4 The revegetation effort shall involve an analysis of the site conditions such as soils and hydrology so that site preparation needs can be evaluated. The revegetation plan shall include the details and procedures required to prepare the restoration site for planting (i.e., grading, soil preparation, soil stockpiling, soil amendments, etc.), including the need for a supplemental irrigation system, if any. <i>(This measure will be implemented through the detailed revegetation plan requirements provided within the Landmark Village mitigation measure LV 4.4-1.)</i></p> <p>SP 4.6-5 Restoration of riparian habitats within the River</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>Corridor SMA shall use plant species native to the Santa Clara River. Cuttings or seeds of native plants shall be gathered within the River Corridor SMA or purchased from nurseries with local supplies to provide good genetic stock for the replacement habitats. Plant species used in the restoration of riparian habitat shall be listed on the approved project plant palette (Specific Plan Table 2.6-1, Recommended Plant Species for Habitat Restoration in the River Corridor SMA) or as approved by the permitting state and federal agencies. <i>(This measure will be implemented through the CMIP of <u>and mitigation</u> measure LV4.4-1 for the Landmark Village project.)</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>SP 4.6-6 The final revegetation plans shall include notes that outline the methods and procedures for the installation of the plant materials. Plant protection measures identified by the project biologist shall be incorporated into the planting design/layout. <i>(This measure will be implemented through the CMIP and mitigation of measures LV 4.4-1 and measure LV 4.4-32 for the Landmark Village project.)</i></p> <p>SP 4.6-7 The revegetation plan shall include guidelines for the maintenance of the mitigation site during the establishment phase of the plantings. The maintenance program shall contain guidelines for the control of non-native plant species, the maintenance of the irrigation system, and the replacement of plant species. <i>(This measure will be implemented through compliance with the mitigation measures LV 4.4-34 and LV 4.4-37 for the Landmark Village project.)</i></p> <p>SP 4.6-8 The revegetation plan shall provide for monitoring to evaluate the growth of the developing habitat. Specific performance goals for the restored habitat shall be defined by qualitative and quantitative characteristics of similar habitats on the river (e.g., density, cover, species composition, structural development). The monitoring effort shall include an evaluation of not only the plant material installed, but the use of the site by wildlife. The length of the monitoring period shall be determined by the permitting state and/or federal agency. <i>(This measure will be implemented through <u>mitigation</u> measures LV 4.4-31 and LV 4.4-34 for the Landmark Village project.)</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>SP 4.6-9 Monitoring reports for the mitigation site shall be reviewed by the permitting state and/or federal agency. <i>(This measure will be implemented through the <u>mitigation</u> measures LV 4.4-40 and LV 4.4-41 for the Landmark Village project.)</i></p> <p>SP 4.6-10 Contingency plans and appropriate remedial measures shall also be outlined in the revegetation plan. <i>(This measure will be implemented through <u>mitigation</u> measures LV 4.4-33 and LV 4.4-34 for the Landmark Village project.)</i></p> <p>SP 4.6-11 Habitat enhancement as referred to in this document means the rehabilitation of areas of native habitat that have been moderately disturbed by past activities (e.g., grazing, roads, oil and natural gas operations, etc.) or have been invaded by non-native plant species such as giant cane (<i>Arundo donax</i>) and tamarisk (<i>Tamarix</i> sp.). <i>(This measure will be implemented through <u>mitigation</u> measures LV 4.4-36 and LV 4.4-37 for the Landmark Village project.)</i></p> <p>SP 4.6-12 Removal of grazing is an important means of enhancement of habitat values. Without ongoing disturbance from cattle, many riparian areas will recover naturally. Grazing except as permitted as a long-term resource management activity will be removed from the River Corridor SMA pursuant to the Long-Term Management Plan set forth in Section 4.6 of the Specific Plan EIR. <i>(This measure will be implemented in accordance with the conditions of approval for the Landmark Village project.)</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>SP 4.6-13 To provide guidelines for the installation of supplemental plantings of native species within enhancement areas, a revegetation plan shall be prepared prior to implementation of mitigation (see guidelines for revegetation plans above). These supplemental plantings will be composed of plant species similar to those growing in the existing habitat patch (see Specific Plan Table 2.6-1). <i>(This measure will be implemented through <u>mitigation</u> measures LV 4.4-1 and LV 4.4-34 for the Landmark Village project.)</i></p> <p>SP 4.6-14 Not all enhancement areas will necessarily require supplemental plantings of native species. Some areas may support conditions conducive for rapid “natural” re-establishment of native species. The revegetation plan may incorporate means of enhancement to areas of compacted soils, poor soil fertility, trash or flood debris, and roads as a way of enhancing riparian habitat values. <i>(This measure will be implemented through the CMIP of mitigation measure LV 4.4-1 for the Landmark Village project.)</i></p>	
	<p>SP 4.6-15 Removal of non-native species such as giant cane (<i>Arundo donax</i>), salt cedar or tamarisk (<i>Tamarix</i> sp.), tree tobacco (<i>Nicotiana glauca</i>), castor bean (<i>Ricinus communis</i>), if included in a revegetation plan to mitigate impacts, shall be subject to the following standards:</p> <ul style="list-style-type: none"> • First priority shall be given to those habitat patches that support or have a high potential for supporting sensitive species, particularly endangered or threatened species. • All non-native species removals shall be conducted according to a resource agency 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>approved exotics removal program.</p> <p>Removal of non-native species in patches of native habitat shall be conducted in such a way as to minimize impacts to the existing native riparian plant species.</p> <p><i>(This measure will be implemented through <u>mitigation</u> measures LV 4.4-36 and LV 4.4-37 for the Landmark Village project.)</i></p> <p>SP 4.6-16 Mitigation banking activities for riparian habitats will be subject to state and federal regulations and permits. Mitigation banking for oak resources shall be conducted pursuant to the Oak Resources Replacement Program. Mitigation banking for elderberry scrub shall be subject to approval of plans by the County Forester. <i>(This measure is implemented through mitigation measure LV 4.4-1 and the development of a CMIP.)</i></p>	
	<p>SP 4.6-17 Access to the River Corridor SMA for hiking and biking shall be limited to the river trail system (including the Regional River Trail and various Local Trails) as set forth in this Specific Plan.</p> <ul style="list-style-type: none"> • The River trail system shall be designed to avoid impacts to existing native riparian habitat, especially habitat areas known to support sensitive species. Where impacts to riparian habitat are unavoidable, disturbance shall be minimized and mitigated as outlined above under Mitigation Measures 4.6-1 through 4.6-8. • Access to the River Corridor SMA will be limited to daytime use of the designated trail system. • Signs indicating that no pets of any kind will be allowed within the River Corridor SMA, with the exception that equestrian 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>use is permitted on established trails, shall be posted along the River Corridor SMA.</p> <ul style="list-style-type: none"> • No hunting, fishing, or motor or off-trail bike riding shall be permitted. • The trail system shall be designed and constructed to minimize impacts on native habitats. <p><i>(This measure is implemented through the Los Angeles County Department of Parks and Recreation review of the project design during the Subdivision Committee review process and conditions of approval.)</i></p>	
	<p>SP 4.6-18 Where development lies adjacent to the boundary of the River Corridor SMA a transition area shall be designed to lessen the impact of the development on the conserved area. Transition areas may be comprised of Open Area, natural or revegetated manufactured slopes, other planted areas, bank areas, and trails. Exhibits 2.6-4, 2.6-5, and 2.6-6 indicate the relationship between the River Corridor SMA and the development (disturbed) areas of the Specific Plan. The SMAs and the Open Area as well as the undisturbed portions of the development areas are shown in green. As indicated on the exhibits, on the south side of the River Corridor SMA is separated from development by the river bluffs, except in one location. The Regional River Trail will serve as transition area on the north side of the river where development areas adjoin the River Corridor SMA (excluding Travel Village). <i>(This measure is implemented through the Los Angeles County Department of Regional Planning review of the project design during the Subdivision Committee review process and conditions of approval.)</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>SP 4.6-19 The following are the standards for design of transition areas:</p> <ul style="list-style-type: none"> • In all locations where there is no steep grade separation between the River Corridor and development, a trail shall be provided along this edge. • Native riparian plants shall be incorporated into the landscaping of the transition areas between the River Corridor SMA and adjacent development areas where feasible for their long-term survival. Plants used in these areas shall be those listed on the approved plant palette (Specific Plan Table 2.6-2 of the Resource Management Plan [Recommended Plants for Transition Areas Adjacent to the River Corridor SMA]). • Roads and bridges that cross the River Corridor SMA shall have adequate barriers at their perimeters to discourage access to the River Corridor SMA adjacent to the structures. • Where bank stabilization is required to protect development areas, it shall be composed of ungrouted rock, or buried bank stabilization as described in Section 2.5.2.a, except at bridge crossings and other locations where public health and safety requirements necessitate concrete or other bank protection. 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>SP 4.6-19 (continued)</p> <ul style="list-style-type: none"> A minimum 100-foot-wide buffer adjacent to the Santa Clara River should be required between the top river-side of bank stabilization and development within the Land Use Designations Residential Low Medium, Residential Medium, Mixed-Use and Business Park unless, through Planning Director review in consultation with the staff biologist, it is determined that a lesser buffer would adequately protect the riparian resources within the River Corridor or that a 100-foot-wide buffer is infeasible for physical infrastructure planning. The buffer area may be used for public infrastructure, such as flood control access; sewer, water, and utility easements; abutments; trails and parks, subject to findings of consistency with the Specific Plan and applicable County policies. <p><i>(This measure is implemented through the Los Angeles County Department of Regional Planning review of the project design during the Subdivision Committee review process and conditions of approval.)</i></p> 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>SP 4.6-20 The following guidelines shall be followed during any grading activities that take place within the River Corridor SMA:</p> <ul style="list-style-type: none"> • Grading perimeters shall be clearly marked and inspected by the project biologist prior to grading occurring within or immediately adjacent to the River Corridor SMA. • The project biologist shall work with the grading contractor to avoid inadvertent impacts to riparian resources. <p><i>(This measure will be implemented through <u>mitigation</u> measures LV 4.4-8 through LV 4.4-26.)</i></p> <p>SP 4.6-21 Upon final approval of the Newhall Ranch Specific Plan, the Special Management Area designation for the River Corridor SMA shall become effective. The permitted uses and development standards for the SMA are governed by the Development Regulations, Chapter 3 of the Specific Plan. <i>(This measure was implemented with the approval of the Newhall Ranch Specific Plan. The Landmark Village project was designed in compliance with the development standards of the Special <u>M</u>anagement Areas and the Significant Ecological Areas compatibility criteria)</i></p>	
	<p>SP 4.6-22 Upon completion of development of all land uses, utilities, roads, flood control improvements, bridges, trails, and other improvements necessary for implementation of the Specific Plan within the River Corridor in each subdivision allowing construction within or adjacent to the River Corridor, a permanent, non-revocable conservation and public access easement shall be offered to the County of Los Angeles pursuant to Mitigation Measure 4.6-23</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>below over the portion of the River Corridor SMA within that subdivision. <i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project.)</i></p> <p>SP 4.6-23 The River Corridor SMA Conservation and Public Access Easement shall be offered to the County of Los Angeles prior to the transfer of the River Corridor SMA ownership, or portion thereof to the management entity described in Mitigation Measure 4.6-26 below. <i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project.)</i></p>	
	<p>SP 4.6-24 The River Corridor SMA Conservation and Public Access Easement shall prohibit grazing, except as a long-term resource management activity, and agriculture within the River Corridor and shall restrict recreation use to the established trail system.</p> <p>Agricultural land uses and grazing for purposes other than long-term resource management activities within the River Corridor shall be extended in the event of the filing of any legal action against Los Angeles County challenging final approval of the Newhall Ranch Specific Plan and any related project approvals or certification of the Final EIR for Newhall Ranch. Agricultural land uses and grazing for purposes other than long-term resource management activities within the River Corridor shall be extended by the time period between the filing of any such legal action and the entry of a final judgment by a court with appropriate jurisdiction, after exhausting all rights of appeal, or execution of a final settlement agreement between all parties to the legal action, whichever occurs first. <i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><i>project.)</i></p> <p>SP 4.6-25 The River Corridor SMA conservation and public access easement shall be consistent in its provisions with any other conservation easements to state or federal resource agencies which may have been granted as part of mitigation or mitigation banking activities. <i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project.)</i></p>	
	<p>SP 4.6-26 Prior to the recordation of the River Corridor SMA Conservation and Public Access Easement as specified in Mitigation Measure 4.6-23 above, the landowner shall provide a plan to the County for the permanent ownership and management of the River Corridor SMA, including any necessary financing. This plan shall include the transfer of ownership of the River Corridor SMA to the Center for Natural Lands Management, or if the Center for Natural Lands Management is declared bankrupt or dissolved, ownership will transfer or revert to a joint powers authority consisting of Los Angeles County (4 members), the City of Santa Clarita (2 members), and the Santa Monica Mountains Conservancy (2 members). <i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project.)</i></p> <p>SP 4.6-26a Two types of habitat restoration may occur in the High Country SMA: 1) riparian revegetation activities principally in Salt Creek Canyon; and 2) oak tree replacement in, or adjacent to, existing oak woodlands and savannahs.</p> <ul style="list-style-type: none"> • Mitigation requirements for riparian revegetation activities within the High Country SMA are the same as those for the River Corridor SMA and are set forth in 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>Mitigation Measures 4.6-1 through 4.6-11 and 4.6-13 through 4.6-16 above.</p> <ul style="list-style-type: none"> Mitigation requirements for oak tree replacement are set forth in Mitigation Measure 4.6-48 below. <p><i>(This measure is implemented through mitigation measure LV4.4-1 and the development of a CMIP.)</i></p>	
	<p>SP 4.6-27 Removal of grazing from the High Country SMA except for those grazing activities associated with long-term resource management programs, is a principal means of enhancing habitat values in the creeks, brushland and woodland areas of the SMA. The removal of grazing in the High Country SMA is discussed below under (b) 4. Long Term Management. All enhancement activities for riparian habitat within the High Country SMA shall be governed by the same provisions as set forth for enhancement in the River Corridor SMA. Specific Plan Table 2.6-3 of the Resource Management Plan provides a list of appropriate plant species for use in enhancement areas in the High Country SMA. <u><i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project and the Newhall Ranch Specific Plan.)</i></u></p> <p>SP 4.6-28 Mitigation banking activities for riparian habitats will be subject to state and federal regulations and permits. Mitigation banking for oak resources, shall be conducted pursuant to the Oak Resource Replacement Program. Mitigation banking for elderberry scrub shall be subject to approval of plans by the County Forester. <i>(This measure is implemented through mitigation measure LV 4.4-1 and the development of a CMIP.)</i></p> <p>SP 4.6-29 <u>Access to the High Country SMA will be limited to day time use of the designated trail</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>system. (Not applicable.)</u></p> <p>SP 4.6-30 <u>No pets of any kind will be allowed within the High Country SMA, with the exception that equestrian use is permitted on established trails. (Not applicable.)</u></p> <p>SP 4.6-31 <u>No hunting, fishing, or motor or trail bike riding shall be permitted. (Not applicable.)</u></p> <p>SP 4.6-32 <u>The trail system shall be designed and constructed to minimize impacts on native habitats. (Not applicable.)</u></p> <p>SP 4.6-33 <u>Construction of buildings and other structures (such as patios, decks, etc.) shall only be permitted upon developed pads within Planning Areas OV-04, OV-10, PV-02, and PV-28 and shall not be permitted on southerly slopes facing the High Country SMA (Planning Area HC-01) or in the area between the original SEA 20 boundary and the High Country boundary. If disturbed by grading, all southerly facing slopes which adjoin the High Country SMA within those Planning Areas shall have the disturbed areas revegetated with compatible trees, shrubs, and herbs from the list of plant species for south and west facing slopes as shown in Table 2.6-3, Recommended Plant Species For Use In Enhancement Areas In The High Country.</u></p> <p><u>Transition from the development edge to the natural area shall also be controlled by the standards of wildfire fuel modification zones as set forth in Mitigation Measure SP 4.6-49. Within fuel modification areas, trees and herbs from Table 2.6-3 of the Resource Management Plan should be planted toward the top of slopes; and trees at lesser densities and shrubs planted on lower slopes. (Not applicable.)</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>SP 4.6-34 Grading perimeters shall be clearly marked and inspected by the project biologist prior to impacts occurring within or adjacent to the High Country SMA. <i>(This measure will be implemented through <u>mitigation</u> measures LV 4.4-8 through LV 4.4-26.)</i></p> <p>SP 4.6-35 The project biologist shall work with the grading contractor to avoid inadvertent impacts to biological resources outside of the grading area. <i>(This measure will be implemented through <u>mitigation</u> measure LV 4.4-18.)</i></p> <p>SP 4.6-36 Upon final approval of the Newhall Ranch Specific Plan, the Special Management Area designation for the High Country SMA shall become effective. The permitted uses and development standards for the SMA are governed by the Development Regulations, Chapter 3. <i>(This measure was implemented with the approval of the Newhall Ranch Specific Plan. The Landmark Village project was designed in compliance with the development standards of the Special management Areas and the Significant Ecological Areas compatibility criteria)</i></p> <p>SP 4.6-37 The High Country SMA shall be offered for dedication in three approximately equal phases of approximately 1,400 acres each proceeding from north to south, as follows:</p> <ol style="list-style-type: none"> 1. The first offer of dedication will take place with the issuance of the 2,000th residential building permit of Newhall Ranch; 2. The second offer of dedication will take place with the issuance of the 6,000th residential building permit of Newhall Ranch; and 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>SP 4.6-37 (continued)</p> <p>3. The remaining offer of dedication will be completed by the 11,000th residential building permit of Newhall Ranch.</p> <p>4. The Specific Plan applicant shall provide a quarterly report to the Departments of Public Works and Regional Planning which indicates the number of residential building permits issued in the Specific Plan area by subdivision map number. <i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project and the provision of the Newhall Ranch Specific Plan.)</i></p> <p>SP 4.6-38 Prior to dedication of the High Country SMA, a conservation and public access easement shall be offered to the County of Los Angeles and a conservation and management easement offered to the Center for Natural Lands Management. The High Country SMA Conservation and Public Access Easement shall be consistent in its provisions with any other conservation easements to state or federal resource agencies that may have been granted as part of mitigation or mitigation banking activities. <u><i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project and the provision of the Newhall Ranch Specific Plan.)</i></u></p>	
	<p>SP 4.6-39 The High Country SMA conservation and public access easement shall prohibit grazing within the High Country, except for those grazing activities associated with the long-term resource management programs, and shall restrict recreation to the established trail system. <u><i>(This measure is implemented in</i></u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><i>accordance with the conditions of approval for the Landmark Village project and the provision of the Newhall Ranch Specific Plan.)</i></p> <p>SP 4.6-40 The High Country SMA conservation and public access easement shall be consistent in its provisions with any other conservation easements to state or federal resource agencies that may have been granted as part of mitigation or mitigation banking activities.. <i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project and the provision of the Newhall Ranch Specific Plan.)</i></p> <p>SP 4.6-41 The High Country SMA shall be offered for dedication in fee to a joint powers authority consisting of Los Angeles County (4 members), the City of Santa Clarita (2 members), and the Santa Monica Mountains Conservancy (2 members). The joint powers authority will have overall responsibility for recreation within and conservation of the High Country. <i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project and the provision of the Newhall Ranch Specific Plan.)</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>SP 4.6-42 An appropriate type of service or assessment district shall be formed under the authority of the Los Angeles County Board of Supervisors for the collection of up to \$24 per single family detached dwelling unit per year and \$15 per single family attached dwelling unit per year, excluding any units designated as Low and Very Low affordable housing units pursuant to Section 3.10, Affordable Housing Program of the Specific Plan. This revenue would be assessed to the homeowner beginning with the occupancy of each dwelling unit and distributed to the joint powers authority for the purposes of recreation, maintenance, construction, conservation and related activities within the High Country Special Management Area. <i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project and the provision of the Newhall Ranch Specific Plan.)</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>SP 4.6-43 Suitable portions of Open Area may be used for mitigation of riparian, oak resources, or elderberry scrub. Mitigation activities within Open Area shall be subject to the following requirements, as applicable.</p> <ul style="list-style-type: none"> • River Corridor SMA Mitigation Requirements, including: Mitigation Measures 4.6-1 through 4.6-11 and 4.6-13 through 4.6-16; and • High Country SMA Mitigation Requirements, including: Mitigation Measures 4.6-27, 4.6-29 through 4.6-42, and • Mitigation Banking – Mitigation Measure 4.6-16. <p><i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project and the provision of the Newhall Ranch Specific Plan.)</i></p> <p>SP 4.6-44 Drainages with flows greater than 2,000 cfs will have soft bottoms. Bank protection will be of ungrouted rock, or buried bank stabilization as described in Section 2.5.2.a, except at bridge crossings and other areas where public health and safety considerations require concrete or other stabilization. <u><i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project and the provision of the Newhall Ranch Specific Plan.)</i></u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>SP 4.6-45 The precise alignments and widths of major drainages will be established through the preparation of drainage studies to be approved by the County at the time of subdivision maps which permit construction. <i>(This measure is implemented through the Los Angeles County Department of Public Works review of the project design during the Subdivision Committee review process and conditions of approval.)</i></p> <p>SP 4.6-46 While Open Area is generally intended to remain in a natural state, some grading may take place, especially for parks, major drainages, trails, and roadways. Trails are also planned to be within Open Area. <i>(This measure is implemented through the Los Angeles County Subdivision Committee review process and conditions of approval.)</i></p> <p>SP 4.6-47 At the time that final subdivision maps permitting construction are recorded, the Open Area within the map will be offered for dedication to the Center for Natural Lands Management. Community Parks within Open Area are intended to be public parks. Prior to the offer of dedication of Open Area to the Center for Natural Lands Management, all necessary conservation and public access easements, as well as easements for infrastructure shall be offered to the County. <i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project and the provision of the Newhall Ranch Specific Plan.)</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>SP 4.6-47a Mitigation Banking will be permitted within the River Corridor SMA, the High Country SMA, and the Open Area land use designations, subject to the following requirements:</p> <ul style="list-style-type: none"> • Mitigation banking activities for riparian habitats will be subject to state and federal regulations, and shall be conducted pursuant to the mitigation requirements set forth in Mitigation Measure 4.6-1 through 4.6-15 above. • Mitigation banking for oak resources shall be conducted pursuant to 4.6-48 below. • Mitigation banking for elderberry scrub shall be subject to approval of plans by the County Forester. <p><i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project and the provision of the Newhall Ranch Specific Plan. No elderberry scrub would be impacted by the Landmark Village project)</i></p> <p>SP 4.6-48 Standards for the restoration and enhancement of oak resources within the High Country SMA and the Open Area include the following (oak resources include oak trees of the sizes regulated under the County Oak Tree Ordinance, southern California black walnut trees, Mainland cherry trees, and Mainland cherry shrubs):</p> <ul style="list-style-type: none"> • To mitigate the impacts to oak resources which may be removed as development occurs in the Specific Plan Area, replacement trees shall be planted in conformance with the oak tree ordinance in effect at that time. • Oak resource species obtained from the local gene pool shall be used in restoration or enhancement. 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>SP 4.6-48 (continued)</p> <ul style="list-style-type: none"> • Prior to recordation of construction-level final subdivision maps, an oak resource replacement plan shall be prepared that provides the guidelines for the oak tree planting and/or replanting. The Plan shall be reviewed by the Los Angeles Department of Regional Planning and the County Forester and shall include the following: site selection and preparation, selection of proper species including sizes and planting densities, protection from herbivores, site maintenance, performance standards, remedial actions, and a monitoring program. • All plans and specifications shall follow County oak tree guidelines, as specified in the County Oak Tree Ordinance. <p><i>(This measure will be implemented through Landmark Village mitigation measures LV 4.4-6, LV 4.4-7, and LV 4.4-53.)</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>SP 4.6-49 To minimize the potential exposure of the development areas, Open Area, and the SMAs to fire hazards, the Specific Plan is subject to the requirements of the Los Angeles County Fire Protection District (LACFPD), which provides fire protection for the area. At the time of final subdivision maps permitting construction in development areas that are adjacent to Open Area and the High Country SMA, a wildfire fuel modification plan shall be prepared in accordance with the fuel modification ordinance standards in effect at that time and shall be submitted for approval to the County Fire Department. <i>(This measure is implemented through the Los Angeles County Fire Department review of the project design during the Subdivision Committee review process and conditions of approval, including fuel modification plan approval.)</i></p> <p>SP 4.6-50 The wildfire fuel modification plan shall depict a fuel modification zone the size of which shall be consistent with the County fuel modification ordinance requirements. Within the zone, tree pruning, removal of dead plant material and weed and grass cutting shall take place as required by the fuel modification ordinance. <i>(This measure is implemented through the Los Angeles County Fire Department review of the project design during the Subdivision Committee review process and conditions of approval, including fuel modification plan approval.)</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>SP 4.6-51 In order to enhance the habitat value of plant communities which require fuel modification, fire retardant plant species containing habitat value may be planted within the fuel modification zone. Typical plant species suitable for Fuel Modification Zones are indicated in Specific Plan Table 2.6-5 of the Resource Management Plan. Fuel modification zones adjacent to SMAs and Open Areas containing habitat of high value such as oak woodland and savannas shall utilize a more restrictive plant list which shall be reviewed by the County Forester. <i>(This measure is implemented through the Los Angeles County Fire Department and Department of Regional Planning review of the project design during the Subdivision Committee review process and conditions of approval, including fuel modification plan approval.)</i></p> <p>SP 4.6-52 The wildfire fuel modification plan shall include the following construction period requirements: (a) a fire watch during welding operations; (b) spark arresters on all equipment or vehicles operating in a high fire hazard area; (c) designated smoking and non-smoking areas; and (d) water availability pursuant to the County Fire Department requirements. <i>(This measure is implemented through the Los Angeles County Fire Department review of the project design during the Subdivision Committee review process and conditions of approval, including fuel modification plan approval.)</i></p>	
	<p>SP 4.6-53 If, at the time any subdivision map proposing construction is submitted, the County determines through an Initial Study, or otherwise, that there may be rare, threatened or</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>endangered, plant or animal species on the property to be subdivided, then, in addition to the prior surveys conducted on the Specific Plan site to define the presence or absence of sensitive habitat and associated species, current, updated site-specific surveys for all such animal or plant species shall be conducted in accordance with the consultation requirements set forth in Mitigation Measure 4.6-59 within those areas of the Specific Plan where such animal or plant species occur or are likely to occur.</p> <p>The site-specific surveys shall include the unarmored three-spine stickleback, the arroyo toad, the Southwestern pond turtle, the California red-legged frog, the southwestern willow flycatcher, the least Bell's vireo, the San Fernando Valley spineflower and any other rare, sensitive, threatened, or endangered plant or animal species occurring, or likely to occur, on the property to be subdivided. All site-specific surveys shall be conducted during appropriate seasons by qualified botanists or qualified wildlife biologists in a manner that will locate any rare, sensitive, threatened, or endangered animal or plant species that may be present. To the extent there are applicable protocols published by either the USFWS or the California Department of Fish and Game, all such protocols shall be followed in preparing the updated site-specific surveys.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>SP 4.6-53 (continued)</p> <p>All site-specific survey work shall be documented in a separate report containing at least the following information: (a) project description, including a detailed map of the project location and study area; (b) a description of the biological setting, including references to the nomenclature used and updated vegetation mapping; (c) detailed description of survey methodologies; (d) dates of field surveys and total person-hours spent on the field surveys; (e) results of field surveys, including detailed maps and location data; (f) an assessment of potential impacts; (g) discussion of the significance of the rare, threatened or endangered animal or plant populations found in the project area, with consideration given to nearby populations and species distribution; (h) mitigation measures, including avoiding impacts altogether, minimizing or reducing impacts, rectifying or reducing impacts through habitat restoration, replacement or enhancement, or compensating for impacts by replacing or providing substitute resources or environments, consistent with CEQA (<i>Guidelines</i> §15370); (i) references cited and persons contacted; and (j) other pertinent information, which is designed to disclose impacts and mitigate for such impacts." (<i>This measure is implemented through the Landmark Village mitigation measures LV 4.4-3, LV 4.4-5, LV 4.4-8, LV 4.4-9, LV 4.4-16, LV 4.4-17, LV 4.4-19, LV 4.4-20, LV 4.4-22, LV 4.4-23, LV 4.4-24, LV 4.4-25, LV 4.4-52, and LV 4.4-55.</i>)</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>SP 4.6-54 Prior to development within or disturbance to occupied Unarmored threespine stickleback habitat, a formal consultation with the USFWS shall occur. <i>(This measure was implemented through the Section 7 Consultation under the Federal Endangered Species and the issuance of the USFWS Biological Opinion during the processing of the 404 Permit by the USACE.)</i></p> <p>SP 4.6-55 Prior to development or disturbance within wetlands or other sensitive habitats, permits shall be obtained from pertinent federal and state agencies and the Specific Plan shall conform with the specific provisions of said permits. Performance criteria shall include that described in Mitigation Measures 4.6-1 through 4.6-16 and 4.6-42 through 4.6-47 for wetlands, and Mitigation Measures 4.6-27, 4.6-28, and 4.6-42 through 4.6-48 for other sensitive habitats. <i>(This measure was implemented through the issuance to the applicant of the CDFG 2081 Incidental Take Permit and the issuance of the 404 Permit by the USACE, incorporating the USFWS Biological Opinion.)</i></p> <p>SP 4.6-56 All lighting along the perimeter of natural areas shall be downcast luminaries with light patterns directed away from natural areas. <i>(This measure is implemented through the Los Angeles County Department of Regional Planning review of the project design during the Subdivision Committee review process and conditions of approval.)</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>SP 4.6-57 Where bridge construction is proposed and water flow would be diverted, blocking nets and seines shall be used to control and remove fish from the area of activity. All fish captured during this operation would be stored in tubs and returned unharmed back to the river after construction activities were complete. <i>(This measure is implemented through the Landmark Village mitigation measures LV 4.4-10 through LV 4.4-14, and LV 4.4-54.)</i></p> <p>SP 4.6-58 To limit impacts to water quality the Specific Plan shall conform with all provisions of required NPDES permits and water quality permits that would be required by the State of California RWQCB. <i>(This measure is implemented through the Landmark Village mitigation measures LV4.4-14 and the issuance of and compliance with the 401 Ccertification by the Regional Water Quality Control Board.)</i></p> <p>SP 4.6-59 Consultation shall occur with the County of Los Angeles (County) and California Department of Fish and Game (CDFG) at each of the following milestones:</p> <ol style="list-style-type: none"> 1. Before Surveys. Prior to conducting sensitive plant or animal surveys at the Newhall Ranch subdivision map level, the applicant, or its designee, shall consult with the County and CDFG for purposes of establishing and/or confirming the appropriate survey methodology to be used. 2. After Surveys. After completion of sensitive plant or animal surveys at the subdivision map level, draft survey results shall be made available to the County and CDFG within sixty (60) calendar days after completion of the field survey work. 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>SP 4.6-59 (continued)</p> <ol style="list-style-type: none"> <li>3. Subdivision Map Submittal. Within thirty (30) calendar days after the applicant, or its designee, submits its application to the County for processing of a subdivision map in the Mesas Village or Riverwood Village, a copy of the submittal shall be provided to CDFG. In addition, the applicant, or its designee, shall schedule a consultation meeting with the County and CDFG for purposes of obtaining comments and input on the proposed subdivision map submittal. The consultation meeting shall take place at least thirty (30) days prior to the submittal of the proposed subdivision map to the County. <li>4. Development/Disturbance and Further Mitigation. Prior to any development within, or disturbance to, habitat occupied by rare, threatened, or endangered plant or animal species, or to any portion of the Spineflower Mitigation Area Overlay, as defined below, all required permits shall be obtained from both USFWS and CDFG, as applicable. It is further anticipated that the federal and state permits will impose conditions and mitigation measures required by federal and state law that are beyond those identified in the Newhall Ranch Final EIR (March 1999), the Newhall Ranch DAA (April 2001) and the Newhall Ranch Revised DAA (2002). It is also anticipated that conditions and mitigation measures required by federal and state law for project-related impacts on endangered, rare, or threatened species and their habitat will likely require changes and 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>SP 4.6-59 (continued)</p> <p>4. (cont'd) revisions to Specific Plan development footprints, roadway alignments, and the limits, patterns and techniques associated with project-specific grading at the subdivision map level. <i>(This measure will be implemented through the compliance by the applicant with the CDFG 2081 Incidental Take Permit.)</i></p> <p>SP 4.6-60 <u>If at the time subdivisions permitting construction are processed, the County determines through an Initial Study that there may be elderberry scrub vegetation on the property being subdivided, then a site-specific survey shall be conducted to define the presence or absence of such habitat and any necessary mitigation measures shall be determined and applied. <i>(This measure is not applicable to Landmark Village because the project would not impact elderberry scrub.)</i></u> Not applicable.</p> <p>SP 4.6-61 <u>If at the time subdivisions permitting construction are processed, the County determines through an Initial Study that there may be mainland cherry trees and/or mainland cherry shrubs on the property being subdivided, then a site-specific survey shall be conducted to define the presence or absence of such habitat and any necessary mitigation measures shall be determined and applied. <i>(This measure is not applicable to Landmark Village because the project would not impact cherry trees.)</i></u> Not applicable.</p> <p>SP 4.6-62 <u>When a map revision or Substantial Conformance determination on any subdivision map or Conditional Use Permit would result in changes to an approved oak tree permit, then the oak tree report for that oak tree permit must</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>be amended for the area of change, and the addendum must be approved by the County Forester prior to issuance of grading permits for the area of the map or CUP being changed. (This measure is not applicable to the Landmark Village project because the project does not propose any change to an existing oak tree permit.) Not applicable.</u></p> <p>SP 4.6-63 Riparian resources that are impacted by buildout of the Newhall Ranch Specific Plan shall be restored with similar habitat at the rate of 1 acre replaced for each acre lost. <i>(This measure has been addressed by project-specific Mitigation Measure LV 4.4-1.)</i></p> <p>SP 4.6-64 <u>The operator of the golf course shall prepare a Golf Course Maintenance Plan which shall include procedures to control storm water quality and ground water quality as a result of golf course maintenance practices, including irrigation, fertilizer, pesticide and herbicide use. This Plan shall be prepared in coordination with the County biologist and approved by the County Planning Director prior to the issuance of a Certificate of Occupancy. (This measure is not applicable to the Landmark Village project because the project does not include construction and operation of a golf course.) Not applicable.</u></p> <p>SP 4.6-65 <u>In order to facilitate the conservation of the spineflower on the Newhall Ranch Specific Plan site, the applicant, or its designee, shall, concurrent with Specific Plan approval, agree to the identified special study areas shown in Figure 2.6-8, Spineflower Mitigation Area Overlay. The applicant, or its designee, further acknowledges that, within and around the Spineflower Mitigation Area Overlay (Figure 2.6-8), changes will likely occur to Specific Plan development footprints, roadway alignments,</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>and the limits, patterns and techniques associated with project-specific grading at the subdivision map level. The applicant, or its designee, shall design subdivision maps that are responsive to the characteristics of the spineflower and all other Endangered plant species that may be found on the Specific Plan site. Not applicable.</p> <p>SP 4.6-66 <u>Direct impacts to known spineflower populations within the Newhall Ranch Specific Plan area shall be avoided or minimized through the establishment of one or more on-site preserves that are configured to ensure the continued existence of the species in perpetuity. Preserve(s) shall be delineated in consultation with the County and CDFG, and will likely require changes and revisions to Specific Plan development footprints for lands within and around the Spineflower Mitigation Area Overlay (Figure 2.6-8).</u></p> <hr/> <p><u>Delineation of the boundaries of Newhall Ranch spineflower preserve(s) for the entire Specific Plan area shall be completed in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesas Village, or that portion of Riverwood Village in which the San Martinez spineflower population occurs.</u></p> <hr/> <p><u>A sufficient number of known spineflower populations shall be included within the Newhall Ranch spineflower preserve(s) in order to ensure the continued existence of the species in perpetuity. The conservation of known spineflower populations shall be established in consultation with the County and CDFG, and as consistent with standards governing issuance of an incidental take permit for spineflower pursuant to Fish and Game</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>Code Section 2081, subdivision (b).</u></p> <p><u>In addition to conservation of known populations, spineflower shall be introduced in appropriate habitat and soils in the Newhall Ranch preserve(s). The creation of introduced populations shall require seed collection and/or top soil at impacted spineflower locations and nursery propagation to increase seed and sowing of seed. The seed collection activities, and the maintenance of the bulk seed repository, shall be approved in advance by the County and CDFG.</u></p> <p><u>Once the boundaries of the Newhall Ranch spineflower preserve(s) are delineated, the project applicant, or its designee, shall be responsible for conducting a spineflower population census within the Newhall Ranch spineflower preserve(s) annually for 10 years. (These census surveys shall be in addition to the surveys required by Mitigation Measure SP 4.6-53, above.) The yearly spineflower population census documentation shall be submitted to the County and CDFG, and maintained by the project applicant, or its designee. If there are any persistent population declines documented in the annual population census reports, the project applicant, or its designee, shall be responsible for conducting an assessment of the ecological factor(s) that are likely responsible for the decline, and implement management activity or activities to address these factors where feasible. In no event, however, shall project-related activities jeopardize the continued existence of the Newhall Ranch spineflower populations. If a persistent population decline is documented, such as a trend in steady population decline that persists for a period of 5 consecutive years,</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>or a substantial drop in population is detected over a 10-year period, spineflower may be introduced in consultation with CDFG in appropriate habitat and soils in the Newhall Ranch preserve(s), utilizing the bulk spineflower seed repository, together with other required management activity or activities. These activities shall be undertaken by a qualified botanist/biologist, subject to approval by the County and CDFG. The project applicant, or its designee, shall be responsible for the funding and implementation of the necessary management activity or activities, including monitoring, as approved by the County and CDFG.</u></p> <hr/> <p><u>Annual viability reports shall be submitted to the County and CDFG for 10 years following delineation of the Newhall Ranch spineflower preserve(s) to ensure long-term documentation of the spineflower population status within the Newhall Ranch preserve(s). In the event annual status reports indicate the spineflower population within the Newhall Ranch preserve(s) is not stable and viable 10 years following delineation of the spineflower preserve(s), the project applicant, or its designee, shall continue to submit annual status reports to the County and CDFG for a period of no less than an additional 5 years. (Not applicable.)</u></p>	
	<p>SP 4.6-67 Indirect impacts associated with the interface between the preserved spineflower populations and planned development within the Newhall Ranch Specific Plan shall be avoided or minimized by establishing open space connections with Open Area, River Corridor, or High Country land use designations. In addition, buffers (i.e., setbacks from developed,</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>landscaped, or other use areas) shall be established around portions of the delineated preserve(s) not connected to Open Area, the River Corridor or the High Country land use designations. The open space connections and buffer configurations shall take into account local hydrology, soils, existing and proposed adjacent land uses, the presence of non-native invasive plant species, and seed dispersal vectors.</p> <p>Open space connections shall be configured such that the spineflower preserves are connected to Open Area, River Corridor, or High Country land use designations to the extent practicable. Open space connections shall be of adequate size and configuration to achieve a moderate to high likelihood of effectiveness in avoiding or minimizing indirect impacts (e.g., invasive plants, increased fire frequency, trampling, chemicals, etc.) to the spineflower preserve(s). Open space connections for the spineflower preserve(s) shall be configured in consultation with the County and CDFG. Open space connections for the spineflower preserve(s) shall be established for the entire Specific Plan area in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesa Village, or that portion of the Riverwood</p>	
	<p>SP 4.6-67 (continued)</p> <p>Village in which the San Martinez spineflower location occurs.</p> <p>For preserves and/or those portions of preserves not connected to Open Area, River Corridor, or High Country land use designations, buffers shall be established at variable distances of between 80 and 200 feet from the edge of development to achieve a</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>moderate to high likelihood of effectiveness in avoiding or minimizing indirect impacts (e.g., invasive plants, increased fire frequency, trampling, chemicals, etc.) to the spineflower preserve(s). The buffer size/configuration shall be guided by the analysis set forth in the "Review of Potential Edge Effects on the San Fernando Valley Spineflower," prepared by Conservation Biology Institute, January 19, 2000, and other sources of scientific information and analysis, which are available at the time the preserve(s) and buffers are established. Buffers for the spineflower preserve(s) shall be configured in consultation with the County and CDFG for the entire Specific Plan area. Buffers for the spineflower preserve(s) shall be established in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesa Village, or that portion of the Riverwood Village in which the San Martinez spineflower location occurs.</p>	
	<p>SP 4.6-67 (continued)</p> <p>Roadways and road rights-of-way shall not be constructed in any spineflower preserve(s) and buffer locations on Newhall Ranch unless constructing the road(s) in such location is found to be the environmentally superior alternative in subsequently required tiered EIRs in connection with the Newhall Ranch subdivision map(s) process. No other development or disturbance of native habitat shall be allowed within the spineflower preserve(s) or buffer(s).</p> <p>The project applicant, or its designee, shall be responsible for revegetating open space connections and buffer areas of the Newhall Ranch spineflower preserve(s) to mitigate temporary impacts due to grading that will occur within portions of those open space</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>connections and buffer areas. The impacted areas shall be reseeded with a native seed mix to prevent erosion, reduce the potential for invasive non-native plants, and maintain functioning habitat areas within the buffer area. Revegetation seed mix shall be reviewed and approved by the County and CDFG. <i>(This measure is implemented by the Landmark Village mitigation measure LV 4.4-1, although the project would not impact a spineflower preserve area.)</i></p> <p>SP 4.6-68 <u>To protect the preserved Newhall Ranch spineflower populations, and to further reduce potential direct impacts to such populations due to unrestricted access, the project applicant, or its designee, shall erect and maintain temporary orange fencing and prohibitive signage around the Newhall Ranch preserve(s), open space connections and buffer areas, which are adjacent to areas impacted by proposed development prior to and during all phases of construction. The areas behind the temporary fencing shall not be used for the storage of any equipment, materials, construction debris, or anything associated with construction activities.</u></p> <hr/> <p><u>Following the final phase of construction of any Newhall Ranch subdivision map adjacent to the Newhall Ranch spineflower preserve(s), the project applicant, or its designee, shall install and maintain permanent fencing along the subdivision tract bordering the preserve(s). Permanent signage shall be installed on the fencing along the preservation boundary to indicate that the fenced area is a biological preserve, which contains protected species and habitat, that access is restricted, and that trespassing and fuel modification are prohibited within the area. The permanent fencing shall be designed to allow wildlife movement.</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>The plans and specifications for the permanent <u>fencing and signage shall be approved by the County and CDFG prior to the final phase of construction of any Newhall Ranch subdivision map adjacent to a Newhall Ranch spineflower preserve(s).</u> (Not applicable.)</p> <p>SP 4.6-69 <u>Indirect impacts resulting from changes to hydrology (i.e., increased water runoff from surrounding development) at the interface between spineflower preserve(s) and planned development within the Newhall Ranch Specific Plan shall be avoided or mitigated to below a level of significance.</u></p> <p>Achievement of this standard will be met through the documented demonstration by the project applicant, or its designee, that the storm drain system achieves pre-development hydrological conditions for the Newhall Ranch spineflower preserve(s). To document such a condition, the project applicant, or its designee, shall prepare a study of the pre- and post-development hydrology, in conjunction with Newhall Ranch subdivision maps adjacent to spineflower preserve(s). The study shall be used in the design and engineering of a storm drain system that achieves pre-development hydrological conditions. The study must conclude that proposed grade changes in development areas beyond the buffers will maintain pre-development hydrology conditions within the preserve(s). The study shall be approved by the Planning Director of the County, and the resulting conditions confirmed by CDFG.</p> <p>The storm drain system for Newhall Ranch subdivision maps adjacent to any spineflower preserves must be approved by the County prior to the initiation of any grading activities.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>(Not applicable.)</u></p> <p>SP 4.6-70 <u>Consistent with the Spineflower Mitigation Area Overlay reflected in Mitigation Measure SP 4.6-65, direct impacts to known Newhall Ranch spineflower populations associated with proposed road construction or modifications to existing roadways shall be further assessed for proposed road construction at the Newhall Ranch subdivision map level, in conjunction with the tiered EIR required for each subdivision map. To avoid or substantially lessen direct impacts to known spineflower populations, Specific Plan roadways shall be redesigned or realigned, to the extent practicable, to achieve the spineflower preserve and connectivity/preserve design/buffer standards set forth in Mitigation Measures SP 4.6-66 and SP 4.6-67. The project applicant, or its designee, acknowledges that that road redesign and realignment is a feasible means to avoid or substantially lessen potentially significant impacts on the now known Newhall Ranch spineflower populations. Road redesign or alignments to be considered at the subdivision map level include</u></p> <p><u>(a) Commerce Center Drive;</u></p> <p><u>(b) Magic Mountain Parkway;</u></p> <p><u>(c) Chiquito Canyon Road;</u></p> <p><u>(d) Long Canyon Road;</u></p> <p><u>(e) San Martinez Grande Road;</u></p> <p><u>(f) Potrero Valley Road;</u></p> <p><u>(g) Valencia Boulevard; and</u></p> <p><u>(h) Any other or additional roadways that have the potential to significantly impact known Newhall Ranch spineflower populations.</u></p> <p><u>Roadways and road rights-of-way shall not be</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>constructed in any spineflower preserve(s) and buffer locations on Newhall Ranch, unless constructing the road(s) in such location is found to be the environmentally superior alternative in subsequently required tiered EIRs in connection with the Newhall Ranch subdivision map(s) process. (Not applicable.)</u></p> <p>SP 4.6-71 <u>Consistent with the Spineflower Mitigation Area Overlay reflected in Mitigation Measure SP 4.6-65, direct impacts to known Newhall Ranch spineflower populations shall be further assessed at the Newhall Ranch subdivision map level, in conjunction with the required tiered EIR process. To avoid or substantially lessen impacts to known spineflower populations at the subdivision map level, the project applicant, or its designee, may be required to adjust Specific Plan development footprints, roadway alignments, and the limits, patterns and techniques associated with project-specific grading to achieve the spineflower preserve and connectivity/preserve design/buffer standards set forth in Mitigation Measures SP 4.6-66 and SP 4.6-67 for all future Newhall Ranch subdivision maps that encompass identified spineflower populations. (Not applicable.)</u></p> <p>SP 4.6-72 <u>A Fire Management Plan shall be developed to avoid and minimize direct and indirect impacts to the spineflower, in accordance with the adopted Newhall Ranch Resource Management Plan (RMP), to protect and manage the Newhall Ranch spineflower preserve(s) and buffers.</u></p> <p><u>The Fire Management Plan shall be completed by the project applicant, or its designee, in conjunction with approval of any Newhall Ranch subdivision map adjacent to a spineflower preserve.</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>The final Fire Management Plan shall be approved by the County of Los Angeles Fire Department through the processing of subdivision maps.</u></p> <p><u>Under the final Fire Management Plan, limited fuel modification activities within the spineflower preserves will be restricted to selective thinning with hand tools to allow the maximum preservation of Newhall Ranch spineflower populations. No other fuel modification or clearance activities shall be allowed in the Newhall Ranch spineflower preserve(s). Controlled burning may be allowed in the future within the Newhall Ranch preserve(s) and buffers, provided that it is based upon a burn plan approved by the County of Los Angeles Fire Department and CDFG. The project applicant, or its designee, shall also be responsible for annual maintenance of fuel modification zones, including, but not limited to, removal of undesirable non-native plants, revegetation with acceptable locally indigenous plants and clearing of trash and other debris in accordance with the County of Los Angeles Fire Department. (Not applicable.)</u></p> <p>SP 4.6-73 <u>At the subdivision map level, the project applicant, or its designee, shall design and implement project-specific design measures to minimize changes in surface water flows to the Newhall Ranch spineflower preserve(s) for all Newhall Ranch subdivision maps adjacent to the preserve(s) and buffers, and avoid and minimize indirect impacts to the spineflower. Prior to issuance of a grading permit for each such subdivision map, the project applicant, or its designee, shall submit for approval to the County plans and specifications that ensure</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>implementation of the following design measures:</u></p> <p>(1) <u>During construction activities, drainage ditches, piping or other approaches will be put in place to convey excess storm water and other surface water flows away from the Newhall Ranch spineflower preserve(s) and connectivity/preserve design/buffers, identified in Mitigation Measures SP 4.6-66 and SP 4.6-67;</u></p> <p>(2) <u>Final grading and drainage design will be developed that does not change the current surface and subsurface hydrological conditions within the preserve(s);</u></p> <p>(3) <u>French drains will be installed along the edge of any roadways and fill slopes that drain toward the preserve(s);</u></p> <p>(4) <u>Roadways will be constructed with slopes that convey water flows within the roadway easements and away from the preserve(s);</u></p> <p>(5) <u>Where manufactured slopes drain toward the preserve(s), a temporary irrigation system would be installed to the satisfaction of the County in order to establish the vegetation on the slope area(s). This system shall continue only until the slope vegetation is established and self sustaining;</u></p> <p>(6) <u>Underground utilities will not be located within or through the preserve(s). Drainage pipes installed within the preserve(s) away from spineflower populations to convey surface or subsurface water away from the populations will be aligned to avoid the preserve(s) to the maximum extent practicable; and</u></p> <p>(7) <u>Fencing or other structural type barriers that will be installed to reduce intrusion of people or domestic animals into the preserve(s) shall incorporate footing designs that minimize</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<u>moisture collection.</u> (Not applicable.)	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>SP 4.6-74 <u>A knowledgeable, experienced botanist/biologist, subject to approval by the County and CDFG, shall be required to monitor the grading and fence/utility installation activities that involve earth movement adjacent to the Newhall Ranch spineflower preserve(s) to avoid the incidental take through direct impacts of conserved plant species, and to avoid disturbance of the preserve(s). The biological monitor will conduct biweekly inspections of the project site during such grading activities to ensure that the mitigation measures provided in the adopted Newhall Ranch Mitigation Monitoring Program (Biota section) are implemented and adhered to.</u></p> <p><u>Monthly monitoring reports, as needed, shall be submitted to the County verifying compliance with the mitigation measures specified in the adopted Newhall Ranch Mitigation Monitoring Program (Biota section).</u></p> <p><u>The biological monitor will have authority to immediately stop any such grading activity that is not in compliance with the adopted Newhall Ranch Mitigation Monitoring Program (Biota section), and to take reasonable steps to avoid the take of, and minimize the disturbance to, spineflower populations within the preserve(s). (Not applicable.)</u></p> <p>SP 4.6-75 <u>The following measures shall be implemented to avoid and minimize indirect impacts to Newhall Ranch spineflower populations during all phases of project construction:</u></p> <p>(1) <u>Water Control. Watering of the grading areas would be controlled to prevent discharge of construction water into the Newhall Ranch preserve(s) or on ground sloping toward the preserve(s). Prior to the initiation of grading</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>operations, the project applicant, or its designee, shall submit for approval to the County an irrigation plan describing watering control procedures necessary to prevent discharge of construction water into the Newhall Ranch preserve(s) and on ground sloping toward the preserve(s).</u></p> <p>(2) <u>Storm Water Flow Redirection. Diversion ditches would be constructed to redirect storm water flows from graded areas away from the Newhall Ranch preserve(s). To the extent practicable, grading of areas adjacent to the preserve(s) would be limited to spring and summer months (May through September) when the probability of rainfall is lower. Prior to the initiation of grading operations, the project applicant, or its designee, would submit for approval to the County a storm water flow redirection plan that demonstrates the flow of storm water away from the Newhall Ranch spineflower preserve(s).</u></p> <p>(3) <u>Treatment of Exposed Graded Slopes. Graded slope areas would be trimmed and finished as grading proceeds. Slopes would be treated with soil stabilization measures to minimize erosion. Such measures may include seeding and planting, mulching, use of geotextiles and use of stabilization mats. Prior to the initiation of grading operations, the project applicant, or its designee, would submit for approval to the County the treatments to be applied to exposed graded slopes that would ensure minimization of erosion. (This measure has been omitted because the project design directly incorporates these measures.). Not applicable.</u></p> <p>SP 4.6-76 <u>In conjunction with submission of the first Newhall Ranch subdivision map in either Mesas Village or that portion of Riverwood</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>Village in which the San Martinez spineflower location occurs, the project applicant, or its designee, shall reassess project impacts, both direct and indirect, to the spineflower populations using subdivision mapping data, baseline data from the Newhall Ranch Final EIR and data from the updated plant surveys (see, Specific Plan EIR Mitigation Measure SP 4.6-53).</u></p> <hr/> <p><u>This reassessment shall take place during preparation of the required tiered EIR for each subdivision map. If the reassessment results in the identification of new or additional impacts to Newhall Ranch spineflower populations, which were not previously known or identified, the mitigation measures set forth in this program, or a Fish and Game Code Section 2081 permit(s) issued by CDFG, shall be required, along with any additional mitigation required at that time. (Not applicable.)</u></p> <p>SP 4.6-77 <u>Direct and indirect impacts to the preserved Newhall Ranch spineflower populations shall require a monitoring and management plan, subject to the approval of the County. The applicant shall consult with CDFG with respect to preparation of the Newhall Ranch spineflower monitoring/management plan. This plan shall be in place when the preserve(s) and connectivity/preserve design/buffers are established (see Mitigation Measures SP 4.6-66 and SP 4.6-67). The criteria set forth below shall be included in the plan.</u></p> <hr/> <p><u>Monitoring. The purpose of the monitoring component of the plan is to track the viability of the Newhall Ranch spineflower preserve(s) and its populations, and to ensure compliance with the adopted Newhall Ranch Mitigation Monitoring Program (Biota section).</u></p> <hr/> <p><u>The monitoring component of the plan shall</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>investigate and monitor factors such as population size, growth or decline, general condition, new impacts, changes in associated vegetation species, pollinators, seed dispersal vectors, and seasonal responses. Necessary management measures will be identified. The report results will be sent annually to the County, along with photo documentation of the assessed site conditions.</u></p> <hr/> <p><u>The project applicant, or its designee, shall contract with a qualified botanist/biologist, approved by the County, with the concurrence of CDFG, to conduct quantitative monitoring over the life of the Newhall Ranch Specific Plan. The botanist/biologist shall have a minimum of three years experience with established monitoring techniques and familiarity with southern California flora and target taxa. Field surveys of the Newhall Ranch spineflower preserve(s) will be conducted each spring. Information to be obtained will include (a) an estimate of the numbers of spineflowers in each population within the preserve(s); (b) a map of the extent of occupied habitat at each population; (c) establishment of photo monitoring points to aid in documenting long-term trends in habitat; (d) aerial photographs of the preserved areas at five-year intervals; (e) identification of significant impacts that may have occurred or problems that need attention, including invasive plant problems, weed problems and fencing or signage repair; and (f) overall compliance with the adopted mitigation measures.</u></p> <hr/> <p><u>For a period of three years from Specific Plan re-approval, all areas of potential habitat on the Newhall Ranch site will be surveyed annually in the spring with the goal of identifying</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>previously unrecorded spineflower populations. Because population size and distribution limits are known to vary depending on rainfall, annual surveys shall be conducted for those areas proposed for development in order to establish a database appropriate for analysis at the project-specific subdivision map level (rather than waiting to survey immediately prior to proceeding with the project-specific subdivision map process). In this way, survey results gathered over time (across years of varying rainfall) will provide information on ranges in population size and occupation. New populations, if they are found, will be mapped and assessed for inclusion in the preserve program to avoid impacts to the species.</u></p> <hr/> <p><u>Management. Based on the outcome of ongoing monitoring and additional project-specific surveys addressing the status and habitat requirements of the spineflower, active management of the Newhall Ranch spineflower preserve(s) will be required in perpetuity. Active management activities will be triggered by a downward population decline over 5 consecutive years, or a substantial drop in population over a 10-year period following County re-approval of the Specific Plan. Examples of management issues that may need to be addressed in the future include, but are not limited to, control of exotic competitive non native plant species, herbivory predation, weed control, periodic controlled burns, or fuel modification compliance.</u></p> <hr/> <p><u>After any population decline documented in the annual populations census following County re-approval of the Specific Plan, the project applicant, or its designee, shall be</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>responsible for conducting an assessment of the ecological factor(s) that are likely responsible for the decline, and implement management activity or activities to address these factors where feasible. If a persistent population decline is documented, such as a trend in steady population decline persistent for a period of 5 consecutive years, or a substantial drop in population detected over a 10-year period, spineflower may be introduced in appropriate habitat and soils in the Newhall Ranch preserve(s), utilizing the bulk spineflower seed repository, together with other required management activity or activities. In connection with this monitoring component, the project applicant, or its designee, shall contract with a qualified botanist/biologist, approved by the County, to complete (a) a study of the breeding and pollination biology of the spineflower, including investigation into seed physiology to assess parameters that may be important as management tools to guarantee self-sustainability of populations, which may otherwise have limited opportunity for germination; and (b) a population genetics study to document the genetic diversity of the Newhall Ranch spineflower population. The criteria for these studies shall be to develop data to make the Newhall Ranch spineflower management program as effective as possible. These studies shall be subject to approval by the County's biologist, with the concurrence of CDFG. These activities shall be undertaken by a qualified botanist/biologist, subject to approval by the County with the concurrence of CDFG. The project applicant, or its designee, shall be responsible for the funding and implementation of the necessary management</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>activity or activities, as approved by the County and CDFG.</u></p> <hr/> <p><u>The length of the active management components set forth above shall be governed by attainment of successful management criteria set forth in the plan rather than by a set number of years. (Not applicable.)</u></p> <p>SP 4.6-78 <u>To the extent project-related direct and indirect significant impacts on spineflower cannot be avoided or substantially lessened through establishment of the Newhall Ranch spineflower preserve(s), and other avoidance, minimization, or other compensatory mitigation measures, a translocation and reintroduction program may be implemented in consultation with CDFG to further mitigate such impacts. Direct impacts (i.e., take) to occupied spineflower areas shall be fully mitigated at a 4:1 ratio. Impacts to occupied spineflower areas caused by significant indirect effects shall be mitigated at a 1:1 ratio.</u></p> <hr/> <p><u>Introduction of new spineflower areas will be achieved through a combination of direct seeding and translocation of the existing soil seed bank that would be impacted by grading. Prior to any development within, or disturbance to, spineflower populations, on-site and off-site mitigation areas shall be identified and seed and top soil shall be collected. One-third of the collected seed shall be sent to the Rancho Santa Ana Botanical Garden for storage. One third of the seed shall be sent to the USDA National Seed Storage Lab in Fort Collins, Colorado for storage. One third shall be used for direct seeding of the on-site and off-site mitigation areas.</u></p> <hr/> <p><u>Direct seeding. Prior to the initiation of grading, the project applicant, or its designee, shall</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>submit to the County a program for the reintroduction of spineflower on Newhall Ranch. The reintroduction program shall include, among other information: (a) location map with scale; (b) size of each introduction polygon; (c) plans and specifications for site preparation, including selective clearing of competing vegetation; (d) site characteristics; (e) protocol for seed collection and application; and (f) monitoring and reporting. The program shall be submitted to CDFG for input and coordination. The project applicant, or its designee, shall implement the reintroduction program prior to the initiation of grading. At least two candidate spineflower reintroduction areas will be created within Newhall Ranch and one candidate spineflower reintroduction area will be identified off site. Both on-site and off-site reintroduction areas will be suitable for the spineflower in both plant community and soils, and be located within the historic range of the taxon. Success criteria shall be included in the monitoring/management plan, with criteria for the germination, growth, and production of viable seeds of individual plants for a specified period.</u></p> <p>Although the reintroduction program is experimental at this stage, the County considers such a program to be a feasible form of mitigation at this juncture based upon available studies. Botanists/biologists familiar with the ecology and biology of the spineflower would prepare and oversee the reintroduction program.</p> <p>Translocation. Prior to the initiation of grading, the project applicant, or its designee, shall submit to the County a translocation program for the spineflower. Translocation would</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>salvage the topsoil of spineflower areas to be impacted due to grading. Salvaged spineflower soil seed bank would be translocated to the candidate spineflower reintroduction areas. The translocation program shall include, among other information: (a) location map with scale; (b) size of each translocation polygon; (c) plans and specifications for site preparation, including selective clearing of competing vegetation; (d) site characteristics; (e) protocol for topsoil collection and application; and (f) monitoring and reporting. The translocation program shall be submitted to CDFG for input and coordination. Translocation shall occur within the candidate spineflower reintroduction areas on site and off site. Successful criteria for each site shall be included in the monitoring/management plan/with criteria for the germination and growth to reproduction of individual plants for the first year a specified period.</u></p> <hr/> <p><u>Although the translocation program is experimental at this stage, the County considers such a program to be a feasible form of mitigation at this juncture based upon available studies. Botanists/biologists familiar with the ecology and biology of the spineflower would prepare and oversee the translocation program. (Not applicable.)</u></p> <p>SP 4.6-79 <u>The project applicant, or its designee, shall engage in regular and ongoing consultation with the County and CDFG in connection with its ongoing agricultural operations in order to avoid or minimize significant direct impacts to the spineflower.</u></p> <hr/> <p><u>In addition, the project applicant, or its designee, shall provide 30 days advance written notice to the County and CDFG of the proposed</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>conversion of its ongoing rangeland operations on Newhall Ranch to more intensive agricultural uses. The purpose of the advance notice requirement is to allow the applicant, or its designee, to coordinate with the County and CDFG to avoid or minimize significant impacts to the spineflower prior to the applicant's proposed conversion of its ongoing rangeland operations to more intensive agricultural uses. This coordination component will be implemented by or through the County's Department of Regional Planning and/or the Regional Manager of CDFG. Implementation will consist of the County and/or CDFG conducting a site visit of the proposed conversion area(s) within the 30-day period, and making a determination of whether the proposed conversion area(s) would destroy or significantly impact spineflower population in or adjacent to those areas. If it is determined that the conversion area(s) do not destroy or significantly impact spineflower populations, then the County and/or CDFG will authorize such conversion activities in the proposed conversion area(s). However, if it is determined that the conversion area(s) may destroy or significantly impact spineflower populations, then the County and/or CDFG will issue a stop work order to the applicant, or its designee. If such an order is issued, the applicant, or its designee, shall not proceed with any conversion activities in the proposed conversion area(s). However, the applicant, or the designee, may take steps to relocate the proposed conversion activities in an alternate conversion area(s). In doing so, the applicant, or its designee, shall follow the same notice and coordination provisions identified above. This conversion shall not include ordinary pasture maintenance</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>and renovation or dry land farming operations consistent with rangeland management. (This measure is not applicable to the Landmark Village project because the project does not include an agricultural component.)</u> Not applicable.</p> <p>SP 4.6-80 <u>Upon approval of tentative tract map(s) impacting the San Martinez portion of the Specific Plan site, the applicant shall work with the Department of Regional Planning staff and SEATAC to establish an appropriately sized preserve area to protect the spineflower population at San Martinez Canyon. (This measure is not applicable to the Landmark Village project because the project is not proposed within the San Martinez portion of the Newhall Ranch Specific Plan.)</u> Not applicable.</p> <p>LV 4.4-1. Mitigation Measures SP 4.6-1 through SP 4.6-16 specify requirements for riparian mitigation conducted in the High Country SMA/SEA 20, Salt Creek area, and Open Area. The applicant will prepare and implement a plan for mitigation of both riparian and upland habitats (such as riparian adjacent big sagebrush scrub), and incorporates these Mitigation Measures (SP 4.6-1 through SP 4.6-16). A Comprehensive Mitigation Implementation Plan (CMIP) has been developed by Newhall Land that provides an outline of mitigation to offset impacts. The CMIP demonstrates the feasibility of creating the required mitigation acreage to offset project impacts (see LV 4.4-29). However, †The CMIP does not identify mitigation actions specific to impacts on waters of the United States. But since these waters are a subset of CDFG jurisdiction, the necessary Corps mitigation requirements would be met or exceeded.¹</p>	

¹ For detailed information concerning the Corps compensatory mitigation program for impacts to waters of the United States, please reference the Corps' Record of Decision (August 2011) and the Section 404(b)1 Alternatives Analysis, included in the Final EIS/EIR for the Newhall Ranch RMDP/SCP project.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-1. (continued)</p> <p>Detailed <u>riparian</u>/wetlands mitigation plans, in accordance with the CMIP, shall be submitted to, and are subject to the approval of, the Corps and CDFG as part of the sub-notification letters for individual projects. Individual project submittals shall include applicable CMIP elements, complying with the requirements outlined below. The detailed wetlands mitigation plan shall specify, at a minimum, the following: (1) the location of mitigation sites; (2) site preparation, including grading, soils preparation, irrigation installation, (2a) the quantity (seed or nursery stock) and species of plants to be planted (all species to be native to region); (3) detailed procedures for creating additional vegetation communities; (4) methods for the removal of non-native plants; (5) a schedule and action plan to maintain and monitor the enhancement/restoration area; (6) a list of criteria by which to measure success of the mitigation sites (e.g., percent cover and richness of native species, percent survivorship, establishment of self-sustaining native plantings, maximum allowable percent of non-native species); (7) measures to exclude unauthorized entry into the creation/enhancement areas; and (8) contingency measures in the event that mitigation efforts are not successful. Individual project <u>The</u> detailed wetlands mitigation plans shall also classify the biological value (as "high," "moderate," or "low") of the vegetation communities to be disturbed as defined in these conditions, or may be based on an agency-approved method (e.g., Hybrid Assessment of</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-1. (continued)</p> <p>Riparian Communities (HARC)). The biological value shall be used to determine mitigation replacement ratios required under LV 4.4-29 and LV 4.4-37. The detailed wetlands mitigation plans shall provide for the 3:1 replacement of any Southern California black walnut to be removed from the riparian corridor for individual projects. The plan shall be subject to the approval of the CDFG and the Corps and approved prior to the impact to riparian resources. LV 4.4-31 describes that the functions and values will be assessed for the riparian areas that will be removed, and LV 4.4-29 and LV 4.4-37 describe the replacement ratios for the habitats that will be impacted.</p> <p>LV 4.4-2. Approximately 1565.75 acres of coastal scrub shall be preserved <u>on site within Open Area and/or off-site</u> within the High Country SMA, the Salt Creek area, or the River Corridor SMA within the Specific Plan area to offset impacts associated with Landmark Village. <u>This measure ensures that preserved areas will be part of a greater managed preserved system of numerous natural vegetation communities meant to support both common and special-status wildlife species. These areas support the same types of habitat that would be lost through construction and would be further enhanced through management and monitoring activities.</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-3. Focused surveys for the undescribed species of everlasting (a special-status plant species) shall be conducted by a qualified botanist prior to the commencement of grading/construction activities wherever suitable habitat (primarily river terraces) could be affected by direct, indirect, or secondary construction impacts. The surveys shall be conducted no more than one year prior to commencement of construction activities within suitable habitat, and the surveys shall be conducted at a time of year when the plants can be located and identified. Should the species be documented within the Project boundary, avoidance measures shall be implemented to minimize impacts to individual plants wherever feasible. These measures shall include minor adjustments to the boundaries/location of haul routes and other Project features. If, due to Project design constraints, avoidance of all plants is not possible, then further measures, described in LV 4.4-4, shall be implemented to salvage seeds and/or transplant individual plants. All seed collection and/or transplantation methods, as well as the location of the receptor site for seeds/plants (assumed to be within preserved open space areas of Newhall Ranch along the Santa Clara River), shall be coordinated with CDFG prior to impacting known occurrences of the undescribed everlasting.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-4. For any individual project, or any phase of an individual project, to be located where undescribed everlasting plants may occur, the applicant shall prepare and implement an Undescribed Everlasting Mitigation and Monitoring Plan prior to the issuance of grading permits.</p> <p>The Plan shall provide for replacement of individual plants to be removed at a minimum 1:1 ratio, within suitable habitat at a site where no future construction-related disturbance will occur. The plan shall specify the following: (1) the location of the mitigation site in protected/preserved areas within the Specific Plan site; (2) methods for harvesting seeds or salvaging and transplantation of individual plants to be impacted; (3) measures for propagating plants (from seed or cuttings) or transferring living specimens from the salvage site to the introduction site; (4) site preparation procedures for the mitigation site; (5) a schedule and action plan to maintain and monitor the mitigation area; (6) the list of criteria and performance standards by which to measure the success of the mitigation site (below); (7) measures to exclude unauthorized entry into the mitigation areas; and (8) contingency measures such as erosion control, replanting, or weeding to implement in the event that mitigation efforts are not successful.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-4. (continued)</p> <p>The performance standards for the Undescribed Everlasting Mitigation and Monitoring Plan shall be the following:</p> <ol style="list-style-type: none"> a. Within four years after reintroducing the undescribed everlasting to the mitigation site, the extent of occupied acreage and the number of established, reproductive plants will be no smaller than at the site lost for project construction. b. Non-native species cover will be no more than 5 percent absolute cover through the term of the restoration. c. Giant reed (<i>Arundo donax</i>), tamarisk (<i>Tamarix ramosissima</i>), perennial pepperweed (<i>Lepidium latifolium</i>), tree of heaven (<i>Ailanthus altissimus</i>), pampas grass (<i>Cortaderia selloana</i>), and any species listed on the California State Agricultural list (CDFA 2009) or Cal-IPC list of noxious weeds (Cal-IPC 2006, 2007) will not be present on the revegetation site as of the date of completion approval. 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-5. The Draft RMDP Slender Mariposa Lily Mitigation and Monitoring Plan (Dudek 2007I) shall be revised and submitted to CDFG and the County for review and approval prior to ground disturbance to occupied habitat. Upon approval, the plan will be implemented by the applicant or its designee. The revised plan will demonstrate the feasibility of enhancing or restoring slender mariposa lily habitat in selected areas to be managed as natural open space (<i>i.e.</i>, the Salt Creek area or High Country SMA/SEA 20, spineflower preserves, or River Corridor SMA/SEA 23) without conflicting with other resource management objectives. Habitat replacement/enhancement will be at a 1:1 ratio (acres restored/enhanced to acres impacted).</p> <p>The revised plan will describe habitat improvement/restoration measures to be completed prior to introducing slender mariposa lily. Habitat improvement/restoration will be based on native occupied slender mariposa lily habitat. The revised plan will specify: (1) the location of mitigation sites (may be selected from among 559 acres of suitable mitigation land in the High Country SMA/SEA 20 and Salt Creek area identified in the Draft Newhall Ranch Mitigation Feasibility Study (Dudek 2007A); (2) a description of "target" vegetation (native shrubland or grassland) to include estimated cover and abundance of native shrubs and grasses in occupied slender mariposa lily habitat on Newhall Ranch land (either at sites to be destroyed by construction or at sites to be preserved); (3) site preparation measures to include topsoil treatment, soil</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-5. (continued)</p> <p>decompaction, erosion control, temporary irrigation systems, or other measures as appropriate; (4) methods for the removal of non-native plants (e.g., mowing, weeding, raking, herbicide application, or burning); (5) the source of all plant propagules (seed, potted nursery stock, etc.), the quantity and species of seed or potted stock of all plants to be introduced or planted into the restoration/enhancement areas; (6) a schedule and action plan to maintain and monitor the enhancement/restoration areas, to include at minimum, qualitative annual monitoring for revegetation success and site degradation due to erosion, trespass, or animal damage for a period no less than two years; (7) as needed where sites are near trails or other access points, measures such as fencing, signage, or security patrols to exclude unauthorized entry into the restoration/enhancement areas; and (8) contingency measures such as replanting, weed control, or erosion control to be implemented if habitat improvement /restoration efforts are not successful.</p> <p>Habitat restoration/enhancement will be judged successful when (1) percent cover and species richness of native species reach 50 percent of their cover and species richness at undisturbed occupied slender mariposa lily habitat at reference sites; and (2) the replacement vegetation has persisted at least one summer without irrigation. At that point slender mariposa lily propagules (seed or bulbs) will be introduced onto the site.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-5. (continued)</p> <p>The revised plan will specify methods to collect propagules and introduce slender mariposa lily into these mitigation sites. Introductions will use source material (seeds or bulbs) from no more than 1.0 mile distant, similar slope exposures, and no more than 500 ft. elevational difference from the mitigation site, unless otherwise approved by CDFG and the County. Bulbs may be salvaged and transplanted from slender mariposa lily occurrences to be lost; alternately, seed may be collected from protected occurrences, following CDFG-approved seed collection guidelines (<i>i.e.</i>, MOU for rare plant seed collection). <u>No bulbs will be translocated into areas within 300 feet of proposed or existing development.</u> Newhall Land or its designee will monitor the reintroduction sites for no fewer than five additional years to estimate slender mariposa lily survivorship (for bulbs) or seedling establishment (for seeded sites).</p> <p>Annual monitoring reports will be prepared and submitted to CDFG and the County and will be made available to the public to guide future mitigation planning for slender mariposa lily. Monitoring reports will describe all restoration/enhancement measures taken in the preceding year; describe success and completion of those efforts and other pertinent site conditions (erosion, trespass, animal damage) in qualitative terms; and describe mariposa lily survival or establishment in quantitative terms.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-6. The Oak Resource Replacement Plan to be prepared (as described in SP 4.6-48) shall include measures to create, enhance, and/or restore 7.82 acres of coast live oak woodland within the High Country SMA/SEA 20. The plan shall be subject to the requirements outlined in SP 4.6-48.</p> <p>The applicant shall prepare an Oak Resource Management Plan that incorporates the findings of the Draft Newhall Ranch Mitigation Feasibility Report (Dudek 2007A) and areas identified (in the technical report) as being suitable for oak woodland enhancement and creation shall be used as mitigation. Other mitigation sites may be used upon approval by the County. The plan shall be reviewed by the County Forester. The plan shall include the following: (1) site selection and preparation; (2) selection of proper species, including sizes and planting densities; (3) protection from herbivores; (4) site maintenance; (5) success criteria; (6) remedial actions; and (7) a monitoring program.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-7. All oaks that will not be removed, that are regulated under the County of Los Angeles Oak Tree Ordinance (CLAOTO) with driplines within 50 feet of land clearing (including brush clearing) or areas to be graded shall be enclosed in a temporary fenced zone for the duration of the clearing or grading activities. Fencing shall extend to the root protection zone (i.e., the area at least 15 feet from the trunk or half again as large as the distance from the trunk to the drip line, whichever distance is greater). No parking or storage of equipment, solvents or chemicals that could adversely affect the trees shall be allowed within 25 feet of the trunk at any time. Removal of the fence shall occur only after the project arborist or qualified biologist confirms the health of preserved trees.</p> <p>LV 4.4-8. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities that result in any disturbance to the banks or wetted channel, aquatic habitats within construction sites and access roads, as well as all aquatic habitats within 300 feet of construction sites and access roads, shall be surveyed by a qualified biologist for the presence of the unarmored threespine stickleback, arroyo chub, and Santa Ana sucker. The Corps and CDFG shall be notified at least 14 days prior to the survey and shall have the option of attending. The biologist shall file a written report of the survey with both agencies within 14 days of the survey and no later than 10 days prior to any construction work in the riverbed.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-8. (continued)</p> <p>If there is evidence that fish spawn has occurred in the survey area, then surveys shall cease unless otherwise authorized by USFWS. If surveys determine that gravid fish are present, that spawning has recently occurred, or that juvenile fish are present in the proposed construction areas, all activities within aquatic habitat will be suspended. Construction within aquatic habitats shall only occur when it is determined that juvenile fish are not present within the Project area.</p> <p>LV 4.4-9. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities, all construction sites and access roads within the riverbed as well as all riverbed areas within 500 feet of construction sites and access roads shall be surveyed at the appropriate season for southwestern pond turtle. Focused surveys shall consist of a minimum of four daytime surveys, to be completed between April 1 and June 1. The survey schedule may be adjusted in consultation with CDFG to reflect the existing weather or stream conditions. The applicant shall develop a Plan to address the relocation of southwestern pond turtle. The Plan shall include but not be limited to the timing and location of the surveys that would be conducted for this species; identify the locations where more intensive efforts should be conducted; identify the habitat and conditions in the proposed relocation site(s); the methods that would be utilized for trapping and</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-9. (continued)</p> <p>relocating individuals; and provide for the documentation/recording of the numbers of animals relocated. The Plan shall be submitted to CDFG for approval 60 days prior to any ground-disturbing activities within potentially occupied habitat.</p> <p>If southwestern pond turtles are detected in or adjacent to the Project, nesting surveys shall be conducted. Focused surveys for evidence of southwestern pond turtle nesting shall be conducted in, or adjacent to, the Project when suitable nesting habitat exists within 1,300 feet of occupied habitat in an area where Project-related ground disturbance will occur (e.g., development, ground disturbance). If both of those conditions are met, a qualified biologist shall conduct focused, systematic surveys for southwestern pond turtle nesting sites. The survey area shall include all suitable nesting habitat within 1,300 feet of occupied habitat in which Project-related ground disturbance will occur. This area may be adjusted based on the existing topographical features on a case-by-case basis with the approval of CDFG. Surveys will entail searching for evidence of pond turtle nesting, including remnant eggshell fragments, which may be found on the ground following nest depredation.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-9. (continued)</p> <p>If a southwestern pond turtle nesting area would be adversely impacted by construction activities, the applicant shall avoid the nesting area. If avoidance of the nesting area is determined to be infeasible, the authorized biologist shall coordinate with CDFG to identify if it is possible to relocate the pond turtles. Eggs or hatchlings shall not be moved without written authorization from CDFG.</p> <p>The qualified biologist shall be present during all activities immediately adjacent to or within habitat that supports populations of southwestern pond turtle. Clearance surveys for pond turtles shall be conducted within 500 feet of potential habitat by the authorized biologist prior to the initiation of construction each day. The resume of the proposed biologist will be provided to CDFG for approval prior to conducting the surveys.</p> <p>LV 4.4-10. Temporary bridges, culvert crossings, or other feasible methods of providing access across the river shall be constructed outside of the winter season and not during periods when spawning is occurring. Prior to the construction of any temporary or permanent crossing of the Santa Clara River, the applicant shall develop a Stream Crossing and Diversion Plan. The plan shall include the following elements: the timing and methods for pre-construction aquatic species surveys; a detailed description of the diversion methods (<i>e.g.</i>, berms shall be constructed of on-site alluvium materials of low</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-10. (continued)</p> <p>silt content, inflatable dams, sand bags, or other approved materials); special-status species relocation; fish exclusion techniques, including the use of block netting and fish relocation; methods to maintain fish passage during construction; channel habitat enhancement, including the placement of vegetation, rocks, and boulders to produce riffle habitat; fish stranding surveys; and the techniques for the removal of crossings prior to winter storm flows. The plan shall be submitted to the USFWS and CDFG for approval at least 30 days prior to implementation.</p> <p>If adult special-status fishes are present and spawning has not occurred, they shall be relocated prior to the diversion or crossing. Block nets of 0.125-inch woven mesh will be set upstream and downstream. On days with possible high temperature or low humidity (temperatures in excess of 80° F), work will be done in the early morning hours, as soon as sufficient light is available, to avoid exposing fishes to high temperatures and/or low humidity. If high temperatures are present, the fishes will be herded to downstream areas past the block net. Once the fishes have been excluded by herding, a USFWS staff member or his or her agents shall inspect the site for remaining or stranded fish. A USFWS staff member or his or her agents shall relocate the fish to suitable habitat outside the Project area (including those areas potentially subject to high turbidity). During the diversion /relocation of fishes, the USFWS or his or her agents shall be present at all times.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-11.</p> <p>a. Stream diversion bypass channels: Stream diversion bypass channels will be constructed when the active wetted channel is within the work zone. Diversion bypass channels will be built in consultation with CDFG/USFWS. Equipment shall not be operated in areas of ponded or flowing water unless authorized by CDFG/USFWS.</p> <p>The diversion channel shall be of a width and depth comparable to the natural river channel. In all cases where flowing water is diverted from a segment of the stream channel, the bypass channel will be constructed prior to the diversion of the active stream. The bypass channel will be constructed prior to diverting the stream, beginning in the downstream area and continuing in an upstream direction. Where feasible and in consultation with CDFG/USFWS, the configuration of the diversion channel will be curved (sinuous) with multiple sets of obstructions (<i>i.e.</i>, boulders, large logs, or other CDFG/USFWS-approved materials) placed in the channel at the point of each curve (<i>i.e.</i>, on alternating sides of the channel). If emergent aquatic vegetation is present in the original channel, the applicant will transplant suitable vegetation into the diversion channel and on the banks prior to or at the time of the water diversion. A qualified restoration</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-11. (continued)</p> <p>ecologist will supervise the construction of the diversion channels on site. The integrity of the channel and diversion shall be maintained throughout the intended diversion period. Channel bank or barrier construction shall be adequate to prevent seepage into or from the work area.</p> <p>Construction of diversion channels shall not occur if surveys determine that gravid fish are present, spawning has recently occurred, or juvenile fish are present in the proposed construction areas.</p> <p>At the conclusion of the diversion, either at the commencement of the winter season, or the completion of construction, the applicant will coordinate with CDFG/USFWS to determine if the diversion should be left in place or the stream returned to the original channel. If CDFG/USFWS determine the stream should be diverted to the original channel, the original channel will be modified prior to re-diversion (<i>i.e.</i>, while dry) to construct curves (sinuosity) into that channel, including the placement of obstructions (<i>i.e.</i>, boulders, large logs, or other CDFG/USFWS-approved materials). The original channel will be replanted with emergent vegetation as the diversion channel was planted. If the diversion channel is abandoned, the boulders will remain in place.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-11. (continued)</p> <p>b. Dewatering:</p> <p>Construction dewatering in close proximity to stream flow shall implement the following:</p> <ul style="list-style-type: none"> - Assess local stream and groundwater conditions, including flow depths, groundwater elevations, and anticipated dewatering cone of influence (radius of draw down). - Assess surface water elevations upstream, adjacent to, and downstream of the extraction points, to assess any critical flow regimes susceptible to excessive draw down and therefore fish stranding issues. - Assess surface water elevations downstream of the discharge locations (if discharge is proposed to the flowing stream) to assess any flow regimes and overbank areas that may be susceptible to flooding and therefore fish stranding at the cessation of discharge. Discharge locations shall also be assessed for potential channel bed erosion from dewatering discharge, and appropriate BMPs must be implemented to prevent excessive erosion or turbidity in the discharge. - The information above shall be summarized and provided in a plan approved by CDFG and Corps. 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-11. (continued) Fish shall be excluded from any artificial flowing channels from dewatering discharge. Methods to ensure separation may include, but are not limited to: block netting at the confluence; creation of a physical drop greater than four inches at the confluence; or maintaining a velocity range unsuitable for fish passage, such as a berm at the confluence with small diameter pipes for discharge.</p> <p>LV 4.4-12 Slow-moving water habitats shall be constructed upstream and downstream of any river crossing or bridge construction area to provide refuge for special-status fishes during construction. Where feasible and in consultation with CDFG and USFWS, the applicant shall enhance slow-moving water habitats for each linear foot disturbed by hand-excavating shallow side channels and placing multiple sets of obstructions (<i>e.g.</i>, boulders, large logs, or other CDFG- and USFWS-approved materials) in the channel.</p> <p>LV 4.4-13 Installation of bridges, culverts or other structures shall not impair movement of fish and aquatic life. Bottoms of temporary culverts shall be placed at or below channel grade. Bottoms of permanent culverts shall be placed below channel grade. Culvert crossings shall include provisions for a low flow channel where velocities are less than two feet per second to allow fish passage.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-14 Water containing mud, silt, or other pollutants from construction activities shall not be allowed to enter a flowing stream or be placed in locations that may be subject to normal storm flows during periods when storm flows can reasonably be expected to occur.</p> <p>LV 4.4-15. Temporary impacts from construction activities in the riverbed shall be restricted to the following areas of disturbance: (1) an 85-foot-wide zone that extends into the river from the base of the rip-rap or gunite bank protection where it intercepts the river bottom; (2) 100 feet on either side of the outer edge of a new bridge or bridge to be modified; (3) a 60-foot-wide corridor for utility lines; (4) 20-foot-wide temporary access ramps; and (5) 60-foot roadway width temporary construction haul routes. The locations of these temporary construction sites and the routes of all access roads shall be shown on maps submitted with the sub-notification letter submitted to the Corps and CDFG for individual project approval. Any variation from these limits shall be submitted, with a justification for a variation for Corps and CDFG approval. The construction plans should indicate what type of vegetation, if any, would be temporarily disturbed or removed and the post-construction activities to facilitate revegetation of the temporarily impacted areas. The boundaries of the construction site and any temporary access roads within the riverbed shall be marked in the field with stakes and flagging. No construction activities, vehicular access, equipment storage, stockpiling, or significant human intrusion shall occur outside the work area and access roads.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-16. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities, all construction sites and access roads within the riverbed as well as all riverbed areas within 300 feet of construction sites and access roads shall be surveyed at the appropriate season for two-striped garter snake and south coast garter snake. Focused surveys shall consist of a minimum of four daytime surveys, to be completed between April 1 and September 1. The survey schedule may be adjusted in consultation with CDFG to reflect the existing weather or stream conditions. If located, the species will be relocated to suitable pre-approved locations identified in the two-striped garter snake and/or south coast garter snake Relocation Plan.</p> <p>The applicant shall develop a Plan to address the relocation of two-striped garter snake and south coast garter snake. The Plan shall include but not be limited to the timing and location of the surveys that would be conducted for each species, identify the locations where more intensive efforts should be conducted, identify the habitat and conditions in the proposed relocation site(s), identify the methods that would be utilized for trapping and relocating the individual species, and provide for the documentation/recording of the species and number of animals relocated. The Plan shall be submitted to CDFG for approval 60 days prior to any ground-disturbing activities, within potentially occupied habitat.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-16. (continued)</p> <p>The qualified biologist shall be present during all activities immediately adjacent to or within habitat that supports populations of two-striped garter snake and/or south coast garter snake. Clearance surveys for garter snakes shall be conducted within 200 feet of potential habitat by the authorized biologist prior to the initiation of construction each day. The resume of the proposed biologists will be provided to CDFG for approval prior to conducting the surveys.</p> <p>LV 4.4-17. Focused surveys for arroyo toad shall be conducted. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities, all construction sites and access roads within the riverbed as well as all riverbed areas within 1,000 feet of construction sites and access roads shall be surveyed at the appropriate season for arroyo toad. The applicant shall contract with a qualified biologist to conduct focused surveys for arroyo toad. If detected in or adjacent to the Project area, no work will be authorized within 500 feet of occupied habitat until the applicant provides concurrence from the USFWS to CDFG and the Corps. The applicant shall implement measures required by the USFWS Biological Opinion that either supplement or supercede these measures. If present, the applicant shall develop and implement a monitoring plan that includes the following measures in consultation with the USFWS and CDFG.</p> <ol style="list-style-type: none"> 1. The applicant shall retain a qualified biologist with demonstrated expertise with arroyo toads to monitor all construction 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-17. (continued)</p> <ol style="list-style-type: none"> 1. (continued) <p>activities in potential arroyo toad habitat and assist the applicant in the implementation of the monitoring program. This person will be approved by the USFWS prior to the onset of ground-disturbing activities. This biologist will be referred to as the authorized biologist hereafter. The authorized biologist will be present during all activities immediately adjacent to or within habitat that supports populations of arroyo toad.</p> 2. Prior to the onset of construction activities, the applicant shall provide all personnel who will be present on work areas within or adjacent to the Project area the following information: <ol style="list-style-type: none"> a. A detailed description of the arroyo toad, including color photographs; b. The protection the arroyo toad receives under the Endangered Species Act and possible legal action that may be incurred for violation of the Act; c. The protective measures being implemented to conserve the arroyo toad and other species during construction activities associated with the proposed Project; and d. A point of contact if arroyo toads are observed. 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-17. (continued)</p> <ol style="list-style-type: none"> 3. All trash that may attract predators of the arroyo toad will be removed from work sites or completely secured at the end of each work day. 4. Prior to the onset of any construction activities, the applicant shall meet on site with staff from the USFWS and the authorized biologist. The applicant shall provide information on the general location of construction activities within habitat of the arroyo toad and the actions taken to reduce impacts to this species. Because arroyo toads may occur in various locations during different seasons of the year, the applicant, USFWS, and authorized biologists will, at this preliminary meeting, determine the seasons when specific construction activities would have the least adverse effect on arroyo toads. The goal of this effort is to reduce the level of mortality of arroyo toads during construction. The parties realize that complete elimination of all mortality is likely not possible because some arroyo toads may occur anywhere within suitable habitat during any given season; the detection of every individual over large areas is impossible because of the small size, fossorial habits, and cryptic coloration of the arroyo toad. 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-17. (continued)</p> <ol style="list-style-type: none"> 5. Where construction can occur in habitat where arroyo toads are widely distributed, work areas will be fenced in a manner that prevents equipment and vehicles from straying from the designated work area into adjacent habitat. The authorized biologist will assist in determining the boundaries of the area to be fenced in consultation with the USFWS/CDFG. All workers will be advised that equipment and vehicles must remain within the fenced work areas. 6. The authorized biologist will direct the installation of the fence and conduct a minimum of three nocturnal surveys to move any arroyo toads from within the fenced area to suitable habitat outside of the fence. If arroyo toads are observed on the final survey or during subsequent checks, the authorized biologist will conduct additional nocturnal surveys if he or she determines that they are necessary in concurrence with the USFWS/CDFG. 7. Fencing to exclude arroyo toads will be at least 24 inches in height. 8. The type of fencing must be approved by the authorized biologist and the USFWS/CDFG. 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-17. (continued)</p> <ol style="list-style-type: none"> 9. Construction activities that may occur immediately adjacent to breeding pools or other areas where large numbers of arroyo toads may congregate will be conducted during times of the year (fall/winter) when individuals have dispersed from these areas. The authorized biologist will assist the applicant in scheduling its work activities accordingly. 10. If arroyo toads are found within an area that has been fenced to exclude arroyo toads, activities will cease until the authorized biologist moves the arroyo toads. 11. If arroyo toads are found in a construction area where fencing was deemed unnecessary, work will cease until the authorized biologist moves the arroyo toads. The authorized biologist in consultation with USFWS/CDFG will then determine whether additional surveys or fencing are needed. Work may resume while this determination is being made, if deemed appropriate by the authorized biologist and USFWS. 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-17. (continued)</p> <ol style="list-style-type: none"> 12. Any arroyo toads found during clearance surveys or otherwise removed from work areas will be placed in nearby suitable, undisturbed habitat. The authorized biologist will determine the best location for their release, based on the condition of the vegetation, soil, and other habitat features and the proximity to human activities. Clearance surveys shall occur on a daily basis in the work area. 13. The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed. 14. Staging areas for all construction activities will be located on previously disturbed upland areas designated for this purpose. All staging areas will be fenced within potential toad habitat. 15. To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force (DAPTF 2009) will be followed at all times. 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-17. (continued)</p> <p>16. Drift fence/pitfall trap surveys will be implemented in toad sensitive areas prior to construction in an effort to reduce potential mortality to this species. Prior to any construction activities in the Project area, silt fence shall be installed completely around the proposed work area and a qualified biologist should conduct a preconstruction/clearance survey of the work area for arroyo toads. Any toads found in the work area should be relocated to suitable habitat. The silt fence shall be maintained for the duration of the work activity.</p> <p>17. The applicant shall restrict work to daylight hours, except during an emergency, in order to avoid nighttime activities when arroyo toads may be present on the access road. Traffic speed should be maintained at 15 mph or less in the work area.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-18. Prior to grading and construction activities, a qualified biologist shall be retained to conduct a Worker Environmental Awareness Program (WEAP) for all construction/contractor personnel. A list of construction personnel who have completed training prior to the start of construction shall be <u>maintained</u> retained on site and this list shall be updated as required when new personnel start work. No construction worker may work in the field for more than five days without participating in the WEAP. The qualified biologist shall provide ongoing guidance to construction personnel and contractors to ensure compliance with environmental/permit regulations and mitigation measures. The qualified biologist shall perform the following:</p> <ol style="list-style-type: none"> 1. Provide training materials and briefings to all personnel working on site. The material shall include but not be limited to the identification and status of plant and wildlife species, significant natural plant community habitats (e.g., riparian), fire protection measures, and review of mitigation requirements. 2. A discussion of the federal and state Endangered Species Acts, Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act, other state or federal permit requirements and the legal consequences of non-compliance with these acts; 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-18. (continued)</p> <ol style="list-style-type: none"> 3. Attend the pre-construction meeting to ensure that timing/location of construction activities do not conflict with other mitigation requirements (e.g., seasonal surveys for nesting birds, pre-construction surveys, or relocation efforts); 4. Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas. Maps showing the location of special-status wildlife or populations of rare plants, exclusion areas, or other construction limitations (e.g., limitations on nighttime work) will be provided to the environmental monitors and construction crews prior to ground disturbance; <u>This applies to preconstruction activities, such as site surveying and staking, natural resources surveying or reconnaissance, establishment of water quality BMPs, and geotechnical or hydrological investigations;</u> 5. Discuss procedures for minimizing harm to or harassment of wildlife encountered during construction and provide a contact person in the event of the discovery of dead or injured wildlife; 6. Review/designate the construction area in the field with the contractor in accordance with the final grading plan; 7. Ensure that haul roads, access roads, and on-site staging and storage areas are sited within grading areas to minimize degradation of vegetation communities adjacent to these areas (if activities outside 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>these limits are necessary, they shall be evaluated by the biologist to ensure that no special-status species habitats will be affected);</p> <p>8. <u>Conduct a field review of the staking (to be set by the surveyor) designating the limits of all construction activity;</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-18. (continued)</p> <p>89. Flag or temporarily fence any construction activity areas immediately adjacent to riparian areas;</p> <p>10. <u>Ensure and document that required pre-construction surveys and/or relocation efforts have been implemented;</u></p> <p><u>To reduce the potential for the spread of exotic invasive invertebrates (e.g. New Zealand mud snails) and weeds (including weed seeds) during Project clearing and construction, all heavy equipment proposed for use on the Project site shall be verified cleaned (including wheels, tracks, undercarriages, and bumpers, as applicable) before delivery to the Project site. Equipment must be documented as exotic invasive invertebrate (e.g. mud snail) and weed free upon delivery to the Project site initial staging area, including: (1) vegetation clearing equipment (skid steer loaders, loaders, dozers, backhoes, excavators, chippers, grinders, and any hauling equipment, such as off-road haul trucks, flat bed, or other vehicles); (2) earth-moving equipment (scrapers, dozers, excavators, loaders, motor-graders, compactors, backhoes, off-road water trucks, and off-road haul trucks); and (3) all Project-associated vehicles (including personal vehicles) that, upon inspection by the monitoring biologist, are deemed to present a risk for spreading exotic invasive invertebrates (e.g. mud snails) or weeds. Equipment shall be cleaned at existing construction yards or at a wash station.</u></p> <p><u>The biological monitor shall document that</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>all construction equipment (as described above) has been cleaned prior to working within the Project work site. Any equipment/vehicles determined to not be free of exotic invasive invertebrates (e.g. mud snails) and weeds shall immediately be sent back to the originating construction yard for washing, or wash station where rinse water is collected and disposed of in either a sanitary sewer or other legal point of disposal. Equipment/vehicles moved from the site must be inspected, and re-washed as necessary, prior to re-engaging in construction activities in the Project work area. A written daily log shall be kept for all vehicle/equipment washing that states the date, time, location, type of equipment washed, methods used, and location of work;</u></p> <p>911. Be present during initial vegetation clearing and grading; and</p> <p>102. Submit to the CDFG an immediate report (within 72 hours) of any conflicts or errors resulting in impacts to special-status biological resources.</p> <p>LV 4.4-19. Prior to the ground disturbance in aquatic areas, construction, or site preparation activities, the applicant shall retain the services of a qualified biologist to conduct pre-construction surveys for western spadefoot toad within all portions of the Project site containing suitable breeding habitat. Surveys shall be conducted during a time of year when the species could be detected (e.g., the presence of rain pools). If western spadefoot toad is identified on the Project site, the following measures will be implemented.</p> <p>1. Under the direct supervision of the</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>qualified biologist, western spadefoot toad habitat shall be created within suitable natural sites on the Specific Plan site outside the proposed development envelope. The amount of occupied breeding habitat to be impacted by the Project shall be replaced at a 2:1 ratio. The actual relocation site design and location shall be approved by CDFG. The location shall be in suitable habitat as far away as feasible from any of the homes and roads to be built. The relocation ponds shall be</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-19. (continued)</p> <ol style="list-style-type: none"> 1. (continued) designed such that they only support standing water for several weeks following seasonal rains in order that aquatic predators (<i>e.g.</i>, fish, bullfrogs, and crayfish) cannot become established. Terrestrial habitat surrounding the proposed relocation site shall be as similar in type, aspect, and density to the location of the existing ponds as feasible. No site preparation or construction activities shall be permitted in the vicinity of the currently occupied ponds until the design and construction of the pool habitat in preserved areas of the site has been completed and all western spadefoot toad adults, tadpoles, and egg masses detected are moved to the created pool habitat. 2. Based on appropriate rainfall and temperatures, generally between the months of February and April, the biologist shall conduct pre-construction surveys in all appropriate vegetation communities within the development envelope. Surveys will include evaluation of all previously documented occupied areas and a reconnaissance-level survey of the remaining natural areas of the site. All western spadefoot adults, tadpoles, and egg masses encountered shall be collected and released in the identified/created relocation ponds described above. 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-19. (continued)</p> <p>3. The qualified biologist shall monitor the relocation site for five years, involving annual monitoring during and immediately following peak breeding season such that surveys can be conducted for adults as well as for egg masses and larval and post-larval toads. Further, survey data will be provided to CDFG by the monitoring biologist following each monitoring period and a written report summarizing the monitoring results will be provided to CDFG at the end of the monitoring effort. Success criteria for the monitoring program shall include verifiable evidence of toad reproduction at the relocation site.</p> <p>LV 4.4-20 Prior to construction the applicant shall develop a relocation plan for coast horned lizard, silvery legless lizard, coastal western whiptail, rosy boa, San Bernardino ringneck snake, and coast patch-nosed snake. The Plan shall include but not be limited to the timing and location of the surveys that would be conducted for each species; identify the locations where more intensive efforts should be conducted; identify the habitat and conditions in the proposed relocation site(s); the methods that would be utilized for trapping and relocating the individual species; and provide for the documentation/recordation of the species and number of the animals relocated. The Plan shall be submitted to CDFG for approval 60 days prior to any ground disturbing activities within potentially occupied habitat.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>LV 4.4-20. (continued)</p> <p>The Plan shall include the specific survey and relocation efforts that would occur for construction activities that occur both during the activity period of the special status species (generally March to November) and for periods when the species may be present in the work area but difficult to detect due to weather conditions (generally December through February). Thirty days prior to construction activities in coastal scrub, chaparral, oak woodland, riparian habitats, or other areas supporting these species qualified biologists shall conduct surveys to capture and relocate individual coast horned lizard, silvery legless lizard, coastal western whiptail, rosy boa, San Bernardino ringneck snake, and coast patch-nosed snake in order to avoid or minimize take of these special-status species. The plan shall require a minimum of three surveys conducted during the time of year/day when each species is most likely to be observed. Individuals shall be relocated to nearby undisturbed areas with suitable habitat. If construction is scheduled to occur during the low activity period (generally December through February) the surveys shall be conducted prior to this period if possible and exclusion fencing shall be placed to limit the potential for re-colonization of the site prior to construction. The qualified biologist will be present during ground-disturbing activities immediately adjacent to or within habitat that supports populations of these species. Clearance surveys for special-status reptiles shall be conducted by a qualified biologist prior to the initiation of construction each day.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-20. (continued) Results of the surveys and relocation efforts shall be provided to CDFG in the annual mitigation status report. Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.</p> <p>LV 4.4-21. Within 30 days of ground <u>disturbing disturbance</u> activities associated with construction or grading that would occur during the nesting/breeding season of native bird species potentially nesting on the site (typically March through August in the Project region, or as determined by a qualified biologist), the applicant shall have weekly surveys conducted by a qualified biologist to determine if active nests of bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the disturbance zone or within 300 feet (500 feet for raptors) of the disturbance zone. <u>Pre-construction surveys shall include nighttime surveys to identify active rookery sites.</u> The surveys shall continue on a weekly basis with the last survey being conducted no more than 7 days prior to initiation of disturbance work. If ground <u>disturbing disturbance</u> activities are delayed, then additional pre-disturbance surveys shall be conducted such that no more than 7 days will have elapsed between the survey and ground disturbing activities.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-21. (continued)</p> <p>If active nests are found, clearing and construction within 300 feet of the nest (500 feet for raptors) shall be postponed or halted, at the discretion of the biologist in consultation with CDFG, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. In the event that golden eagles establish an active nest in the River Corridor SMA/SEA 23, the buffers will be established in consultation with CDFG. Potential golden eagle nesting will be reported to CDFG within 24 hours. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers and construction personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as a construction monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts to on these nests occur. Results of the surveys shall be provided to CDFG in the annual mitigation status report.</p> <p>For listed riparian songbirds (least Bell's vireo, southwestern willow flycatcher, yellow-billed cuckoo) USFWS protocol surveys shall be conducted. If active nests are found, clearing and construction within 300 feet of the nest shall be postponed or halted, at the discretion of the biologist in consultation with CDFG and USFWS, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-21. (continued)</p> <p>nesting. If no active nests are observed, construction may proceed. If active nests are found, work may proceed provided that construction activity is located at least 300 feet from active nests (or as authorized through the context of the Biological Opinion and 2081b Incidental Take Permit). This buffer may be adjusted provided noise levels do not exceed 60 dB(A) hourly L_{eq} at the edge of the nest site as determined by a qualified biologist in coordination with a qualified acoustician.</p> <p>If the noise meets or exceeds the 60 dB(A) L_{eq} threshold, or if the biologist determines that the construction activities are disturbing nesting activities, the biologist shall have the authority to halt the construction and shall devise methods to reduce the noise and/or disturbance in the vicinity. This may include methods such as, but not limited to, turning off vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nest site and the construction activities, and working in other areas until the young have fledged. If noise levels still exceed 60 dB(A) L_{eq} hourly at the edge of nesting territories and/or a no-construction buffer cannot be maintained, construction shall be deferred in that area until the nestlings have fledged. All active nests shall be monitored on a weekly basis until the nestlings fledge. The qualified biologist shall be responsible for documenting the results of the surveys and the ongoing monitoring and for reporting these results to CDFG and USFWS.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-21. (continued)</p> <p>For coastal California gnatcatcher, the applicant shall conduct USFWS protocol surveys in suitable habitat within the Project area and all areas within 500 feet of access or construction-related disturbance areas. Suitable habitats, according to the protocol, include "coastal sage scrub, alluvial fan, chaparral, or intermixed or adjacent areas of grassland and riparian habitats." A permitted biologist shall perform these surveys according to the USFWS' (1997a) Coastal California Gnatcatcher Presence/Absence Survey Guidelines. If a territory or nest is confirmed, the USFWS and CDFG shall be notified immediately. If present, a 500-foot disturbance-free buffer shall be established and demarcated by fencing or flagging. No Project activities may occur in these areas unless otherwise authorized by USFWS and CDFG. Construction activities in suitable gnatcatcher habitat will be monitored by a full-time qualified biologist. The monitoring shall be of a sufficient intensity to ensure that the biologist could detect the presence of a bird in the construction area.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-22 Thirty days prior to construction activities, a qualified biologist shall conduct CDFG protocol surveys to determine whether the burrowing owl is present at the site. The surveys shall consist of three site visits and shall be conducted in areas dominated by field crops, disturbed habitat, grasslands, and along levee locations, or if such habitats occur within 500 feet of a construction zone. If located, occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFG verifies through non-invasive methods that either the birds have not begun egg-laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival. If the burrowing owl is detected but nesting is not occurring, construction work can proceed after any owls have been evacuated from the site using CDFG-approved burrow closure procedures and after alternative nest sites have been provided in accordance with the CDFG Staff Report on Burrowing Owl Mitigation (10-17-95).</p> <p>Unless otherwise authorized by CDFG, a 500-foot buffer, within which no activity will be permissible, will be maintained between Project activities and nesting burrowing owls during the nesting season. This protected area will remain in effect until August 31 or at CDFG's discretion and based upon monitoring evidence, until the young owls are foraging independently.</p> <p>Results of the surveys and relocation efforts shall be provided to CDFG in the annual mitigation status report.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-23 Thirty days prior to construction activities in grassland, scrub, chaparral, oak woodland, riverbank, and agriculture habitats, or other suitable habitat, a qualified biologist shall conduct a survey within the proposed construction disturbance zone and within 200 feet of the disturbance zone for San Diego black-tailed jackrabbit and San Diego desert woodrat.</p> <p>If San Diego black-tailed jackrabbits are present, non-breeding rabbits shall be flushed from areas to be disturbed. Dens, depressions, nests, or burrows occupied by pups shall be flagged and ground-disturbing activities avoided within a minimum of 200 feet during the pup-rearing season (February 15 through July 1). This buffer may be reduced based on the location of the den upon consultation with CDFG. Occupied maternity dens, depressions, nests, or burrows shall be flagged for avoidance, and a biological monitor shall be present during construction. If unattended young are discovered, they shall be relocated to suitable habitat by a qualified biologist. The applicant shall document all San Diego black-tailed jackrabbit identified, avoided, or moved and provide a written report to CDFG within 72 hours. Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-23 (continued)</p> <p>If active San Diego desert woodrat nests (stick houses) are identified within the disturbance zone or within 100 feet of the disturbance zone, a fence shall be erected around the nest site adequate to provide the woodrat sufficient foraging habitat at the discretion of the qualified biologist in consultation with CDFG. Clearing and construction within the fenced area will be postponed or halted until young have left the nest. The biologist shall serve as a construction monitor during those periods when disturbance activities will occur near active nest areas to ensure that no inadvertent impacts to these nests will occur. If avoidance is not possible, the applicant will take the following sequential steps: (1) all understory vegetation will be cleared in the area immediately surrounding active nests followed by a period of one night without further disturbance to allow woodrats to vacate the nest, (2) each occupied nest will then be disturbed by a qualified wildlife biologist until all woodrats leave the nest and seek refuge off site, and (3) the nest sticks shall be removed from the Project site and piled at the base of a nearby hardwood tree (preferably a coast live oak or California walnut). Relocated nests shall not be spaced closer than 100 feet apart, unless a qualified wildlife biologist has determined that a specific habitat can support a higher density of nests. The applicant shall document all woodrat nests moved and provide a written report to CDFG.</p> <p>All woodrat relocation shall be conducted by a qualified biologist in possession of a scientific collecting permit.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-24 Thirty days prior to construction activities in grassland, scrub, chaparral, oak woodland, riverbank, and agriculture habitats, or other suitable habitat a qualified biologist shall conduct a survey within the proposed construction disturbance zone and within 200 feet of the disturbance zone for American badger.</p> <p>If American badgers are present, occupied habitat shall be flagged and ground-disturbing activities avoided within 50 feet of the occupied den. Maternity dens shall be avoided during the pup-rearing season (February 15 through July 1) and a minimum 200 foot buffer established. This buffer may be reduced based on the location of the den upon consultation with CDFG. Maternity dens shall be flagged for avoidance, identified on construction maps, and a qualified biologist shall be present during construction. If avoidance of a non-maternity den is not feasible, badgers shall be relocated either by trapping or by slowly excavating the burrow (either by hand or mechanized equipment under the direct supervision of the biologist, removing no more that four inches at a time) before or after the rearing season (February 15 through July 1). Any relocation of badgers shall occur only after consultation with CDFG. A written report documenting the badger removal shall be provided to CDFG within 30 days of relocation.</p> <p>Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-25 No earlier than 30 days prior to the commencement of construction activities, a preconstruction survey shall be conducted by a qualified biologist to determine if active roosts of special-status bats are present on or within 300 feet of the Project disturbance boundaries. Should an active maternity roost be identified (the breeding season of native bat species in California generally occurs from April 1 through August 31), the roost shall not be disturbed and construction within 300 feet shall be postponed or halted, at the discretion of the biological monitor, until the roost is vacated and juveniles have fledged, as determined . Surveys shall include rocky outcrops, caves, structures, and large trees (particularly trees 12 inches in diameter or greater at 4.5 feet above grade with loose bark or other cavities). Trees and rocky outcrops shall be surveyed by a qualified bat biologist (<i>i.e.</i>, a biologist holding a CDFG collection permit and a Memorandum of Understanding with CDFG allowing the biologist to handle bats). If active maternity roosts or hibernacula are found, the rock outcrop or tree occupied by the roost shall be avoided (<i>i.e.</i>, not removed) by the Project. If avoidance of the maternity roost must occur, the bat biologist shall survey (through the use of radio telemetry or other CDFG approved methods) for nearby alternative maternity colony sites. If the bat biologist determines in consultation with and with the approval of CDFG that there are alternative roost sites used by the maternity colony and young are not present then no further action is required.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-25 (continued)</p> <p>If a maternity roost will be impacted by the Project, and no alternative maternity roosts are in use near the site, substitute roosting habitat for the maternity colony shall be provided on, or in close proximity to, the Project site no less than three months prior to the eviction of the colony. Large concrete walls (<i>e.g.</i>, on bridges) on south or southwestern slopes that are retrofitted with slots and cavities are an example of structures that may provide alternative potential roosting habitat appropriate for maternity colonies. Alternative roost sites must be of comparable size and proximal in location to the impacted colony. CDFG shall also be notified of any hibernacula or active nurseries within the construction zone.</p> <p>If non-breeding bat hibernacula are found in trees scheduled to be removed or in crevices in rock outcrops within the grading footprint, the individuals shall be safely evicted, under the direction of a qualified bat biologist, by opening the roosting area to allow airflow through the cavity or other means determined appropriate by the bat biologist (<i>e.g.</i>, installation of one-way doors). In situations requiring one-way doors, a minimum of one week shall pass after doors are installed and temperatures should be sufficiently warm for bats to exit the roost because bats do not typically leave their roost daily during winter months in southern coastal California. This action should allow all bats to leave during the course of one week. Roosts that need to be removed in situations where the use of one-way doors is not necessary in the</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-25 (continued)</p> <p>judgment of the qualified bat biologist in consultation with CDFG shall first be disturbed by various means at the direction of the bat biologist at dusk to allow bats to escape during the darker hours, and the roost tree shall be removed or the grading shall occur the next day (<i>i.e.</i>, there shall be no less or more than one night between initial disturbance and the grading or tree removal). These actions should allow bats to leave during nighttime hours, thus increasing their chance of finding new roosts with a minimum of potential predation during daylight.</p> <p>If an active maternity roost is located on the Project site, and alternative roosting habitat is available, the demolition of the roost site must commence before maternity colonies form (<i>i.e.</i>, prior to March 1) or after young are flying (<i>i.e.</i>, after July 31) using the exclusion techniques described above.</p> <p>LV 4.4-26 Any <u>common or</u> special-status species bat day roost sites found by a qualified biologist during pre-construction surveys conducted per LV 4.4-25, to be directly (within project disturbance footprint) or indirectly (within 300 feet of project disturbance footprint) impacted are to be mitigated with creation of artificial roost sites. The Project applicant shall establish (an) alternative roost site(s) within suitable preserved open space located at an adequate distance from sources of human disturbance.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-27 The Project applicant will retain a qualified biologist to develop an Exotic Wildlife Species Control Plan and implement a control program for bullfrog, African clawed frog, and crayfish. The program will require the control of these species during construction within the River corridor and modified tributaries (bridges, diversions, bank stabilization, drop structures). The Plan shall include a description of the species targeted for eradication, the methods of harvest that will be employed, the disposal methods, and the measures that would be employed to avoid impacts to sensitive wildlife (e.g., stickleback, arroyo toad, nesting birds) during removal activities (i.e., timing, avoidance of specific areas). Annual monitoring shall occur for the first five years after construction of Project facilities. Monitoring will be conducted within sentinel locations along the River Corridor SMA/SEA 23 and where the Project provides potential habitat for these species (e.g., future ponds and water features). Control shall be conducted within Project facilities where monitoring results indicate that exotic species have colonized an area. <u>After the first five years, a Natural Lands Management Organization (NLMO) will conduct monitoring and control exotic species in perpetuity.</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-28 In order to reduce impacts to biological resources from grading and construction activities, all related activities will be conducted to facilitate the escape of animals to natural areas. Construction and grading activities will begin in disturbed areas in order to avoid stranding animals in isolated patches of vegetation. Trenches will be covered at night to prevent animals from falling into and being trapped in trenches.</p> <p>LV 4.4-29 The permanent removal of CDFG jurisdictional riparian habitats in the river and tributaries shall be replaced by creating riparian habitats <u>(at a ratio of 1:1)</u> of similar functions and values (see LV 4.4-31 on the Project site, or as allowed under LV 4.4-37. Riparian habitat meeting success criteria (see LV 4.4-34) two years in advance of the removal or riparian habitat cannot meet the success criteria two years in advance of the project, the ratios listed below in Table 4.4-12 will apply.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
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4.4 BIOTA (continued)

**Table 4.4-12
CDFG Jurisdictional Permanent Impacts Mitigation Ratios**

Ratios Listed by Vegetation Types & Quality				
Vegetation Community	Veg Code / ID	HIGH Reach Value*	MEDIUM Reach Value**	LOW Reach Value***
		(Mit. Ratio)	(Mit. Ratio)	(Mit. Ratio)
Southern Cottonwood–Willow Riparian Forrest	SCWRF	4:1	3:1	2:1
Southern Willow Scrub	SWS	3:1	2.5:1	2:1
Oak Woodland (Coast Live, Valley)	CLOW / VOW	3:1	2.5:1	2:1
Big Sagebrush Scrub	BSS	2.5:1	2:1	1.5:1
Mexican Elderberry Scrub	MES	2.5:1	2:1	1.5:1
Cismontane Alkaline Marsh	CAM	2.5:1	2:1	1.5:1
Coastal and Valley Fresh Water Marsh	CFWM	2:1	1.5:1	1:1
Mulefat Scrub	MFS	2:1	1.5:1	1.25:1
Arrowweed Scrub	AWS	2:1	1.5:1	1:1
California Sagebrush scrub, and CSB-dominated habitats	CSB, CSB-A, -BS, -CB, -CHP, and -PS	2:1	1.5:1	1:1
Herbaceous Wetland	HW	1.5:1	1.25:1	1:1
River Wash, emergent veg.	RW	1.5:1	1.25:1	1:1
Chaparral, Chamise Chaparral	CHP, CC	1.5:1	1.25:1	1:1
Coyote Brush Scrub	CYS	1.5:1	1.25:1	1:1
Eriodictyon Scrub	EDS	1.5:1	1.25:1	1:1
California Grass Lands	CGL	1:1	1:1	1:1
Agricultural / Disturbed / Developed	AGR / DL / DEV	1:1	1:1	1:1

Notes:

* HIGH reach value indicates a portion of the Santa Clara River or main tributary that scored above 0.79 Total Score utilizing the HARC methodology described in Section 4.2, Geomorphology and Riparian Resources, of the Draft EIS/EIR.

** MEDIUM reach value indicates a portion of the Santa Clara River or main tributary that scored between 0.4 and 0.79 Total Score utilizing the HARC methodology described in Section 4.2.

*** LOW reach value indicates a portion of the Santa Clara River or main tributary that scored below 0.4 Total Score utilizing the HARC methodology described in Section 4.2.

Ratios for Permanent Impacts to all classifications: Mitigation initiated two years prior to disturbance: 1:1 ratio; mitigation initiated less than two years after disturbance shall follow ratios in table above; mitigation initiated two to five years after disturbance shall add 0.5 to each value in the table above; and over five years, 1.0 is added to each value in the table above. (For example, initiation of mitigation of mulefat scrub three years after disturbance for a high habitat impact would be a ratio of 2.5:1, instead of 2:1 if initiated within two years of disturbance or 3:1 if initiated more than five years after disturbance.)

Ratios for Temporary Impacts to all classifications: Disturbance period less than two years, 1:1; two to five years, 1.5:1; over five years, 2:1, except for removal of southern cottonwood and oak woodlands, which shall be mitigated at 2:1 for High, 1.5:1 for Medium, and 1:1 for Low for all periods (except for pre-mitigated, which is 1:1).

Exotic/Invasive Species Removal, followed by restoration/revegetation, may be used to offset impacts above. Mitigation shall be credited at an acreage equivalent to the percentage of exotic vegetation at the restoration site. This means, for example, if a 10-acre area is occupied by 10% exotic species, restoration will be credited for 1 acre of impact. As appropriate and authorized by CDFG, reduced percentage credits may be applied for invasive removal with passive restoration (weeding and documentation of natural recruitment only).

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-30 Creation of new vegetation communities and restoration of impacted vegetation communities shall occur at suitable sites in or adjacent to the watercourses <u>jurisdictional areas</u> or in areas where bank stabilization would occur. <u>Locations where the excavation of uplands for bank protection/stabilization results in creation of new, unvegetated riverbed or other disturbance shall receive the highest level of priority for vegetation community restoration.</u> The highest priority vegetation community restoration sites are to be new riverbed and tributary areas created, or disturbed sites impacted, during the excavation of uplands for bank protection/stabilization activities. Restoration sites may also occur at locations outside the riverbed where there are appropriate hydrologic conditions to create a self-sustaining riparian vegetation community and where upland and riparian vegetation community values are absent or very low. All sites shall contain suitable hydrological conditions and surrounding land uses to ensure a self-sustaining functioning riparian vegetation community. Candidate restoration sites shall be described in the annual mitigation status report (LV 4.4-41). Sites will be approved when the detailed wetlands mitigation plans are submitted to the Corps and CDFG as part of the sub-notification letters submitted for individual projects. Status of the sites will be addressed as part of the annual mitigation status report and mitigation accounting form agency review. Each mitigation revegetation plan will include acreages, maps and site specific descriptions of the proposed revegetation site, including analysis of soils, hydrologic suitability, and present and future adjacent land uses.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	LV 4.4-31 Replacement vegetation communities shall be designed to replace the functions and values of the vegetation communities being removed. The replacement vegetation communities shall have similar dominant trees and understory shrubs and herbs (excluding exotic species) to	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation																																
4.4 BIOTA (continued)																																		
	<p>LV 4.4-31 (continued)</p> <p>those of the affected vegetation communities (see Table 4.4-13 for example of recommended plant species for the River Corridor SMA/SEA 23 and tributaries). In addition, the replacement vegetation communities shall be designed to replicate the density and structure of the affected vegetation communities once the replacement vegetation communities have met the mitigation success criteria.</p> <hr/> <p style="text-align: center;">Table 4.4-13 Potential Plant Species for Vegetation Community Restoration in the River Corridor SMA/SEA 23 and Tributaries</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left; background-color: #e0e0e0;">Trees</th> </tr> </thead> <tbody> <tr> <td style="width: 50%;">red willow</td> <td><i>Salix laevigata</i></td> </tr> <tr> <td>arroyo willow</td> <td><i>Salix lasiolepis</i></td> </tr> <tr> <td>Fremont cottonwood</td> <td><i>Populus fremontii</i></td> </tr> <tr> <td>black cottonwood</td> <td><i>Populus balsamifera ssp. trichocarpa</i></td> </tr> <tr> <td>western sycamore</td> <td><i>Platanus racemosa</i></td> </tr> </tbody> </table> <hr/> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left; background-color: #e0e0e0;">Shrubs</th> </tr> </thead> <tbody> <tr> <td style="width: 50%;">mulefat</td> <td><i>Baccharis salicifolia</i></td> </tr> <tr> <td>sandbar willow</td> <td><i>Salix exigua</i></td> </tr> <tr> <td>arrow weed</td> <td><i>Pluchea sericea</i></td> </tr> </tbody> </table> <hr/> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left; background-color: #e0e0e0;">Herbs</th> </tr> </thead> <tbody> <tr> <td style="width: 50%;">mugwort</td> <td><i>Artemisia douglasiana</i></td> </tr> <tr> <td>western ragweed</td> <td><i>Ambrosia psilostachya</i></td> </tr> <tr> <td>cattail</td> <td><i>Typha latifolia</i></td> </tr> <tr> <td>bulrush</td> <td><i>Scirpus americanus</i></td> </tr> <tr> <td>prairie bulrush</td> <td><i>Scirpus maritimus</i></td> </tr> </tbody> </table> <p><small>Note: This is a recommended list. Other species may be found suitable based on site conditions and state and federal permits.</small></p>	Trees		red willow	<i>Salix laevigata</i>	arroyo willow	<i>Salix lasiolepis</i>	Fremont cottonwood	<i>Populus fremontii</i>	black cottonwood	<i>Populus balsamifera ssp. trichocarpa</i>	western sycamore	<i>Platanus racemosa</i>	Shrubs		mulefat	<i>Baccharis salicifolia</i>	sandbar willow	<i>Salix exigua</i>	arrow weed	<i>Pluchea sericea</i>	Herbs		mugwort	<i>Artemisia douglasiana</i>	western ragweed	<i>Ambrosia psilostachya</i>	cattail	<i>Typha latifolia</i>	bulrush	<i>Scirpus americanus</i>	prairie bulrush	<i>Scirpus maritimus</i>	
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Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-32 Average plant spacing shall be determined based on an analysis of vegetation communities to be replaced. The applicant shall develop plant spacing specifications for all riparian vegetation communities to be restored. Plant spacing specifications shall be reviewed and approved by the Corps and CDFG when restoration plans are submitted to the agencies as part of the sub-notification letters submitted to the Corps and CDFG for individual projects or as part of the annual mitigation status report and mitigation accounting form.</p> <p>LV 4.4-33 If at any time prior to Agency approval of the restoration area, the site is subject to an act of God (flood, fires, or drought), the applicant shall be responsible for replanting the damaged area. The site will be subject to the same success criteria as provided for LV 4.4-34. Should a second act of God occur prior to Agency approval of the restoration area, the applicant shall coordinate with the Agencies to develop an alternative restoration strategy(ies) to meet success requirements. This may include restoration elsewhere in the River corridor or tributaries.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-34 The revegetation site will be considered "complete" upon meeting all of the following success criteria. In a sub-notification letter, the applicant may request modification of success criteria on a project by project basis. Acceptance of such request will be at the discretion of CDFG and the Corps.</p> <ol style="list-style-type: none"> 1. Regardless of the date of initial planting, any restoration site must have been without active manipulation by irrigation, planting, or seeding for a minimum of three years prior to Agency consideration of successful completion. 2. The percent cover and species richness of native vegetation shall be evaluated based on local reference sites established by CDFG and the Corps for the plant communities in the impacted areas. 3. Native shrubs and trees shall have at least 80 percent survivorship after two years beyond the beginning of the success evaluation start date. This may include natural recruitment. 4. Non-native species cover will be no more than 5 percent absolute cover through the term of the restoration. 5. Giant reed (<i>Arundo donax</i>), tamarisk (<i>Tamarix ramosissima</i>), perennial pepperweed (<i>Lepidium latifolium</i>), tree of heaven (<i>Ailanthus altissimus</i>), pampas grass (<i>Cortaderia selloana</i>) and any species listed on the California State Agricultural list, or Cal-IPC list of noxious weeds will not be present on the revegetation site as of the date of completion approval. 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-34 (continued)</p> <p>6. Using the HARC assessment methodology, the compensatory mitigation site shall meet or exceed the baseline functional scores of the impact area in Corps' jurisdictional waters, as described in the Compensatory Mitigation Plan² for Waters of the United States. If the compensatory mitigation site cannot meet or exceed the baseline functional score of the impact area in jurisdictional waters of the United States, additional mitigation area would be required to compensate for the functional loss.</p> <p>LV 4.4-35 Temporary irrigation shall be installed as necessary for plant establishment. Irrigation shall continue as needed until the restoration site becomes self sustaining regarding survivorship and growth. Irrigation shall be terminated in the fall to provide the least stress to plants.</p> <p>LV 4.4-36 As an alternative to the creation/restoration of vegetation communities to compensate for permanent removal of riparian vegetation communities, in the Santa Clara River, the applicant may control In areas where invasive exotic plant species control is authorized by CDFG within the Upper Santa Clara River Sub-Watershed for a portion of the Santa Clara River mitigation required under LV 4.4-29. The applicant may perform this work or contribute "in-lieu fees of other riparian habitat mitigation (LV 4.4-29)." to the Upper Santa Clara River</p>	

² For detailed information concerning the Corps compensatory mitigation program for impacts to waters of the United States, please reference the Corps' Record of Decision (August 2011) and the Section 404(b)1 Alternatives Analysis, included in the Final EIS/EIR for the Newhall Ranch RMDP/SCP project.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>Arundo/Tamarisk Removal Program to perform this work, if available. The weed control sites shall be selected in a coordinated, logical manner to ensure that giant reed and other invasive weeds are controlled to improve and expand wildlife and endangered species habitat; reduce flooding, erosion, and fire</p>	
	<p>LV 4.4-36 (continued) hazards; improve water quality; and potentially increase stream flow/water quantity in the project watercourses. Removal <u>removal</u> areas shall be kept free of exotic plant species for 5 years after initial treatment. In areas where extensive exotic removal occurs, revegetation with native plants or natural recruitment shall be documented.</p> <p>LV 4.4-37 The exotics control program may utilize methods and procedures in accordance with the provisions in the Upper Santa Clara River Watershed Arundo/Tamarisk Removal Plan Final Environmental Impact Report, dated February 2006, or the applicant may propose alternative methods and procedures for Corps and CDFG review and approval pursuant to a sub-notification letter <u>or annual mitigation status report submittal. Exotic plant species control will be credited at an acreage equivalent to the percentage of exotic vegetation at the restoration site. For example: a 10-acre site occupied by 10% exotic species will be credited with one acre of mitigation when placed under the exotics control program. Exotic plant species control will be credited for 1 acre of mitigation.</u></p> <p>LV 4.4-38 All native riparian trees with a 3-inch diameter at breast height (dbh) or greater in temporary construction areas shall be replaced using 1- or 5-gallon container plants, containered trees, or</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>pole cuttings in the temporary construction areas in the winter following the construction disturbance. The growth and survival of the replacement trees shall meet the performance standards specified in LV 4.4-34. In addition, the growth and survival of the planted trees shall be monitored until they meet the self-sustaining success criteria in accordance with the methods and reporting procedures specified in LV 4.4-34, LV 4.4-40, and LV 4.4-41.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-39 Vegetation communities temporarily impacted by the proposed project shall be revegetated as described in LV 4.4-29. Large trunks of removed trees may also remain on site to provide habitat for invertebrates, reptiles, and small mammals or may be anchored within the project site for erosion control. To facilitate restoration, mulch, or native topsoil (the top 6- to 12-inch deep layer containing organic material), may be salvaged from the work area prior to construction. Following construction, salvaged topsoil shall be returned to the work area and placed in the restoration site. Within one year, the project biologist will evaluate the progress of restoration activities in the temporary impact areas to determine if natural recruitment has been sufficient for the site to reach performance goals. In the event that native plant recruitment is determined by the project biologist to be inadequate for successful habitat establishment, the site shall be revegetated in accordance with the methods designed for permanent impacts (i.e., seeding, container plants, and/or a temporary irrigation system may be recommended). This will help ensure the success of temporary mitigation areas. The applicant shall restore the temporary construction area per the success criteria and ratios described in LV 4.4-1, LV 4.4-29, and LV 4.4-34. Annual monitoring reports on the status of the recovery or temporarily impacted areas shall be submitted to the Corps and CDFG as part of the annual mitigation status report (LV 4.4-40 and LV 4.4-41).</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-40 To provide an accurate and reliable accounting system for mitigation, the applicant shall file a mitigation accounting form annually with the Corps and CDFG by April 1.</p> <p>LV 4.4-41 An annual mitigation status report shall be submitted to the Corps and CDFG by April 1 of each year until satisfaction of success criteria identified in LV 4.4-34. This report shall include any required plans for plant spacing, locations of candidate restoration and weed control sites or proposed "in-lieu fees," restoration methods, and vegetation community restoration performance standards. For active vegetation community creation sites, the report shall include the survival, percent cover, and height of planted species; the number by species of plants replaced; an overview of the revegetation effort and its success in meeting performance criteria; the method used to assess these parameters; and photographs. For active exotics control sites, the report shall include an assessment of weed control; a description of the relative cover of native vegetation, bare areas, and exotic vegetation; an accounting of colonization by native plants; and photographs. The report shall also include the mitigation accounting form (see LV 4.4-40), which outlines accounting information related to species planted or exotics control and mitigation credit remaining. The annual mitigation and monitoring report shall document the current functional capacity of the compensatory mitigation site using the HARC assessment methodology, as well as documenting the baseline functional scores of the impact site in jurisdictional waters of the United States.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-42 Prior to the construction of adjacent developments, signs will be placed along the roads indicating potential wildlife crossings where mountain lions and mule deer are known to cross in consultation with CDFG. Road undercrossings will be built in accordance with accepted design criteria to allow the passage of mountain lions and mule deer. The applicant shall prepare a Wildlife Movement Corridor Plan that specifically addresses wildlife movement corridors at San Martinez Grande, Chiquito Canyon, and Castaic Creek, which shall be monitored for one year prior to construction of the SR-126 widenings. The Plan shall address current movement, the methods that will be implemented to provide for passage, including lighting, fencing, vegetation planting, the installation of bubblers to encourage wildlife usage, and the size of the passage. The applicant shall install motion cameras at these locations in consultation with CDFG and monitor these passages for a period of two years subsequent to constructing improvements. A report of the wildlife documented to utilize these crossings shall be provided to CDFG annually. In addition, the Salt Creek crossing west of the Project area will be enhanced prior to initiation of construction in Long Canyon (southern portion of the Homestead Village). This crossing will be monitored for one year at the initiation of RMDP development, for two years at the time the crossing is enhanced, and then for three years after Project build-out. Prior to the construction of adjacent developments, signs will be placed along the roads indicating potential wildlife crossings where mountain lions and mule deer are likely to cross. (This</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>mitigation measure has been identified to offset cumulative impacts to wildlife habitat (including coastal scrub). Implementation of the measure is linked directly to construction activities related to the widening of SR-126 and/or the southern portion of the Homestead Village area, but is not required for implementation with the Landmark Village tract map.)</u></p> <p>LV 4.4-43 Development areas shall have dust control measures implemented and maintained to prevent dust from impacting vegetation communities and special-status plant and aquatic wildlife species. Dust control shall comply with SCAQMD Rule 403d (SCAQMD 2005). Where construction activities occur within 100 feet of known special-status plant species locations, chemical dust suppression shall not be utilized. Where determined necessary by a qualified biologist, a screening fence (<i>i.e.</i>, a six-foot-high chain link fence with green fabric up to a height of 5 feet) shall be installed to protect special-status species locations.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-44 Plant palettes proposed for use on landscaped slopes, street medians, park sites, and other public landscaped and FMZ areas within 400<u>200</u> feet of native vegetation communities shall be reviewed by a qualified restoration specialist to ensure that the proposed landscape plants will not naturalize and require maintenance or cause vegetation community degradation in the open space areas (River Corridor SMA/SEA 23, High Country SMA/SEA 20, Salt Creek area, and natural portions of the Open Area). Container plants to be installed within public areas within 200 feet of the open space areas shall be inspected by a qualified restoration specialist for the presence of disease, weeds, and pests, including Argentine ants. Plants with pests, weeds, or diseases shall be rejected. In addition, landscape plants within 400<u>200</u> feet of native vegetation communities shall not be on the Cal-IPC California Invasive Plant Inventory (most recent version) or on the list of Invasive Ornamental Plants listed in Appendix B of the SCP. The current Cal-IPC list can be obtained from the Cal-IPC website (http://www.cal-ipc.org/ip/inventory/index.php). Landscape plans will include a plant palette composed of native or non-native, non-invasive species that do not require high irrigation rates. Except as required for fuel modification, irrigation of perimeter landscaping shall be limited to temporary irrigation (<i>i.e.</i>, until plants become established).</p> <p>LV 4.4-45 Waste and recycling receptacles that discourage foraging by wildlife species adapted to urban environments shall be installed in common areas and parks throughout the Landmark</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	Village site.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-46 An Integrated Pest Management (IPM) plan that addresses the use of pesticides (including rodenticides and insecticides) on site will be prepared prior to the issuance of building permits for the initial tract map. <u>The IPM will implement appropriate Best Management Practices to avoid and minimize adverse effects on the natural environment, including vegetation communities, special-status species, species without special status, and associated habitats, including prey and food resources (e.g., insects, small mammals, seeds). Potential management practices include cultural (e.g., planting pest-free stock plants), mechanical (e.g., weeding, trapping), and biological controls (e.g., natural predators or competitors of pest species, insect growth regulators, natural pheromones, or biopesticides), and the judicious use of chemical controls, as appropriate (e.g., targeted spraying versus broadcast applications). The IPM will establish management thresholds (i.e., not all incidences of a pest require management); prescribe monitoring to determine when management thresholds have been exceeded; and identify the most appropriate and efficient control method that avoids and minimizes risks to natural resources.</u> Preparation of the covenants, conditions, and restrictions (CC&Rs) for each tract map shall include language that prohibits the use of anticoagulant rodenticides in the Project site.</p> <p>LV 4.4-47 The Natural Lands Management Organization (NLMO) shall fund or otherwise coordinate the regular removal of trash and debris from riparian habitats on or adjacent to the project site. The removal of trash shall be conducted in a manner as to not disturb sensitive habitats.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>LV 4.4-48 Each tract map Home Owners' Association shall supply educational information to future residents regarding pets, wildlife, and open space areas. The material shall discuss the presence of native animals (e.g., coyote, bobcat, mountain lion), indicate that those native animals could prey on pets, indicate that no actions shall be taken against native animals should they prey on pets allowed outdoors, and indicate that pets must be leashed while using the designated trail system and/or in any areas within or adjacent to open space. Control of stray and feral cats and dogs will be conducted in open space areas on an as-needed basis by the NLMO(s) or the Newhall Ranch JPA managing the River Corridor SMA/SEA 23, High Country SMA/SEA 20, or Salt Creek area or by the HOAs managing the Open Areas. Feral cats and dogs may be trapped and deposited with the local Society for the Prevention of Cruelty to Animals or the Los Angeles County Department of Animal Control.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-49 Permanent fencing shall be installed along all River Corridor SMA/SEA 23 trails adjacent to the Santa Clara River, or other sensitive resources, in order to minimize impacts associated with increased human presence on protected vegetation communities and special-status plant and wildlife species. The fencing will be split rail to avoid inhibiting wildlife movement. Viewing platforms will be located in land covers currently mapped as agriculture, disturbed land, or developed land.</p> <p>LV 4.4-50 A cowbird trapping program shall be implemented once vegetation clearing begins and maintained throughout the construction, maintenance, and monitoring period of the riparian restoration sites. A minimum of five traps shall be utilized, with at least one trap adjacent to the project site and one or two traps located at feeding areas or other CDFG-approved location. The trapping contractor may consult with CDFG to request modification of the trap location(s). CDFG must approve any relocation of the traps. Traps will be maintained beginning each year on April 1 and concluding on/about November 1 (may conclude earlier, depending upon weather conditions and results of capture). The trapping contractor may also consult CDFG on a modified, CDFG-approved trapping schedule modification. The applicant shall follow CDFG and USFWS protocol. In the event that trapping is terminated after the first few years, subsequent phases of the RMDP development will require initiation of trapping surveys to determine whether re-establishment of the trapping program is necessary.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-51 Upon initiating landscaping within <u>Following the completion and occupancy of</u> a development area, quarterly monitoring shall be initiated for Argentine ants along the urban-open space interface at sentinel locations where invasions could occur (e.g., where moist microhabitats that attract Argentine ants may be created). A qualified biologist shall determine the monitoring locations. Ant pitfall traps will be placed in these sentinel locations and operated on a quarterly basis to detect invasion by Argentine ants. If Argentine ants are detected during monitoring, direct control measures will be implemented immediately to help prevent the invasion from worsening. These direct controls may include but are not limited to nest/mound insecticide treatment, or available natural control methods being developed. A general reconnaissance of the infested area would also be conducted to identify and correct the possible source of the invasion, such as uncontrolled urban runoff, leaking pipes, or collected water. Monitoring and control of Argentine ants would occur for a 5-year period. <u>After the first 5 years, the NLMO or other entity will be responsible for controlling Argentine ants.</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-52 Thirty days prior to construction activities, a qualified biologist shall conduct a preconstruction survey for ringtail. The survey area shall include suitable riparian and woodland habitat (southern coast live oak riparian forest, southern cottonwood-willow riparian forest, southern willow scrub, coast live oak woodland, valley oak woodland, and mixed oak woodland) within the construction disturbance zone and a 300-foot buffer around the construction site. Should the ringtail be observed in the breeding and rearing period of February 1 through August 31, no construction-related activities shall occur within 300 feet of the occupied area for the period of February 1 through August 31 or until the ringtail has been determined by a qualified biologist (in consultation with CDFG) to no longer occupy areas within 300 feet of the construction zone and/or that construction activities would not adversely affect the successful rearing of young. If the ringtail is observed within the construction disturbance zone or in the 300-foot buffer around the construction site in the nonbreeding/rearing period of September 1 through January 31, and avoidance is not possible, denning ringtail shall be safely evicted under the direction of a qualified biologist (as determined by a Memorandum of Understanding with CDFG). All activities that involve the ringtail shall be documented and reported to CDFG.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-53 Any southern California black walnut and mainland cherry trees or shrubs outside riparian areas greater than one inch dbh shall be replaced in the ratio of at least 2:1. Multi-trunk trees/shrub dbh shall be calculated based on combined trunk dbh. Mitigation shall be deemed complete when each replacement tree attains at least one inch in diameter one foot above the base.</p> <p>LV 4.4-54 During any stream diversion or culvert installation activity, a qualified biologist(s) shall be present and shall patrol the areas within, upstream, and downstream of the work area. The biologists shall inspect the diversion and inspect for stranded fish or other aquatic organisms. Under no circumstances shall the unarmored threespine stickleback be collected or relocated, unless USFWS personnel or their agents implement this measure. Any event involving stranded fish shall be recorded and reported to CDFG and USFWS within 24 hours.</p> <p>LV 4.4-55 Conduct focused surveys for California red-legged frogs. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities, all construction sites and access roads within the riverbed as well as all riverbed areas within 1,000 feet of construction sites and access roads shall be surveyed at the appropriate season for California red-legged frogs. The applicant shall contract with a qualified biologist to conduct focused surveys for California red-legged frogs. If detected in or adjacent to the Project area, no work will be authorized within 500 feet of occupied habitat until the applicant provides concurrence from</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-55 (continued)</p> <p>the USFWS to CDFG and Corps. If present, the applicant shall implement measures required by the USFWS Biological Opinion for California red-legged frog that either supplement or supercede these measures. If present, the applicant shall develop and implement a monitoring plan that includes the following measures in consultation with the USFWS and CDFG.</p> <ol style="list-style-type: none"> 1. The applicant shall retain a qualified biologist with demonstrated expertise with California red-legged frogs to monitor all construction activities in potential red-legged frog habitat and assist the applicant in the implementation of the monitoring program. This person will be approved by the USFWS prior to the onset of ground-disturbing activities. This biologist will be referred to as the authorized biologist hereafter. The authorized biologist will be present during all activities immediately adjacent to or within habitat that supports populations of California red-legged frogs. 2. Prior to the onset of construction activities, the applicant shall provide all personnel who will be present on work areas within or adjacent to the Project area the following information: <ol style="list-style-type: none"> a. A detailed description of the California red-legged frogs, including color photographs; 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-55 (continued)</p> <ul style="list-style-type: none"> b. The protection the California red-legged frog receives under the Endangered Species Act and possible legal action that may be incurred for violation of the Act; c. The protective measures being implemented to conserve the California red-legged frogs and other species during construction activities associated with the proposed Project; and d. A point of contact if California red-legged frogs are observed. <p>3. All trash that may attract predators of the California red-legged frogs will be removed from work sites or completely secured at the end of each work day.</p> <p>4. Prior to the onset of any construction activities, the applicant shall meet on site with staff from the USFWS and the authorized biologist. The applicant shall provide information on the general location of construction activities within habitat of the California red-legged frogs and the actions taken to reduce impacts to this species. Because California red-legged frogs may occur in various locations during different seasons of the year, the applicant, USFWS, and authorized biologist will, at this preliminary meeting, determine the seasons when specific construction activities would have the least adverse effect on California red-legged frogs. The goal of this effort is to reduce the level of mortality of California red-legged frogs during construction.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-55 (continued)</p> <ol style="list-style-type: none"> 5. Work areas will be fenced in a manner that prevents equipment and vehicles from straying from the designated work area into adjacent habitat. The authorized biologist will assist in determining the boundaries of the area to be fenced in consultation with the USFWS/CDFG. All workers will be advised that equipment and vehicles must remain within the fenced work areas. 6. The authorized biologist will direct the installation of the fence and conduct a minimum of three nocturnal surveys to move any California red-legged frogs from within the fenced area to suitable habitat outside of the fence. If California red-legged frogs are observed on the final survey or during subsequent checks, the authorized biologist will conduct additional nocturnal surveys if he or she determines that they are necessary in concurrence with the USFWS/CDFG. 7. Fencing to exclude California red-legged frogs will be at least 24 inches in height. 8. The type of fencing must be approved by the authorized biologist and the USFWS/CDFG. 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-55 (continued)</p> <ol style="list-style-type: none"> 9. Construction activities that may occur immediately adjacent to breeding pools or other areas where large numbers of California red-legged frogs may congregate will be conducted during times of the year (fall/winter) when individuals have dispersed from these areas. The authorized biologist will assist the applicant in scheduling its work activities accordingly. 10. If California red-legged frogs are found within an area that has been fenced to exclude California red-legged frogs, activities will cease until the authorized biologist moves the California red-legged frog(s). 11. If California red-legged frogs are found in a construction area where fencing was deemed unnecessary, work will cease until the authorized biologist moves the California red-legged frogs. The authorized biologist in consultation with USFWS/CDFG will then determine whether additional surveys or fencing are needed. Work may resume while this determination is being made, if deemed appropriate by the authorized biologist and USFWS. 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOTA (continued)		
	<p>LV 4.4-55 (continued)</p> <p>12. Any California red-legged frogs found during clearance surveys or otherwise removed from work areas will be placed in nearby suitable, undisturbed habitat. The authorized biologist will determine the best location for their release, based on the condition of the vegetation, access to deep perennial pools, soil, and other habitat features and the proximity to human activities. Clearance surveys shall occur on a daily basis in the work area.</p> <p>13. The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed.</p> <p>14. Staging areas for all construction activities will be located on previously disturbed upland areas, if possible, designated for this purpose. All staging areas will be fenced.</p> <p>15. To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force (DAPTF 2009) will be followed at all times.</p>	
	<p><u>LV 4.4-56 Bridge and culvert designs, where practicable, shall provide roosting habitat for bats. A qualified biologist shall work with the project engineer in identifying and incorporating structures into the design that provide suitable roosting habitat for bat species occurring in the project area. The final design of the roosting</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>structures would be chosen in consultation with CDFG.</u></p>	
	<p><u>LV 4.4-57 The 1,518-acre Salt Creek area shall be offered for dedication to the public pursuant to Condition 42 of the approved Specific Plan using a "rough step" land dedication approach. Irrevocable offers of dedication will be provided to CDFG for identified impact offsets in accordance with the Plan (LV 4.4-1). The Salt Creek area includes approximately 629 acres of coastal scrub communities within both Ventura and Los Angeles counties. This land dedication shall be managed in conjunction with the 4,205-acre High Country SMA (containing 1,314 acres of coastal scrub communities).</u></p> <p><u>a. To facilitate wildlife movement between the north side of SR-126 and the Salt Creek area, enhancements will be made to the existing agricultural undercrossing and to the agricultural land at the base of Salt Creek as discussed in LV 4.4-42. A Wildlife Movement Enhancement Plan shall be submitted to the Corps and CDFG for approval prior to implementation. The plan shall include at the minimum the following:</u></p> <p><u>i. A portion of the agricultural field on the north side of SR-126 will be dedicated to wildlife movement. Trees and/or scrubs will be planted in the agricultural field to guide wildlife into the existing undercrossing.</u></p> <p><u>ii. On the south side of SR-126 two rows of trees/scrubs will be planted to guide wildlife to the Santa Clara River.</u></p> <p><u>iii. A wildlife corridor will be created</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>through the agricultural fields at the base of Salt Creek Canyon.</u></p> <p><u>(The second part of this mitigation measure (a.i. through a.iii.) has been identified to offset cumulative impacts to wildlife habitat, including coastal scrub). Implementation of the measure is linked directly to construction activities related to the widening of SR-126 and/or the southern portion of the Homestead Village area but is not required for implementation with the Mission Village tract map.)</u></p>	
	<p><u>LV 4.4-58 The Newhall Ranch JPA will have overall responsibility for recreation within and conservation of the High Country. The Newhall Ranch JPA and NLMO shall develop and implement a conservation education and citizen awareness program for the High Country SMA informing the public of the special-status resources present within the High Country SMA and providing information on common threats posed by the presence of people and pets to those resources. The NLMO shall install trailhead and trail signage indicating the High Country SMA is a biological conservation area and advising that people and their animals must stay on existing trails at all times and that violators may be cited. The NLMO shall provide quarterly maintenance patrols to remove litter and monitor trail expansion and fire hazards within the High Country SMA, funded by the JPA.</u></p> <p><u>LV 4.4-59 Supplemental restoration of coastal scrub shall be conducted as an adaptive management measure pursuant to LV 4.4-2. Eight areas were identified in the Draft Newhall Ranch Mitigation Feasibility Report in the High</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>Country SMA, Salt Creek area, and River Corridor SMA (Dudek 2007A) for coastal scrub restoration. In the event that coastal scrub restoration is required pursuant to LV 4.4-2, the applicant shall develop a Coastal Scrub Restoration Plan, subject to the approval of CDFG. The plan shall specify, at a minimum, the following: (1) the location of mitigation sites to be selected from suitable mitigation land in the High Country and Salt Creek areas identified in the Feasibility Study; (2) a description of "target" vegetation (native shrubland) to include estimated cover and abundance of native shrubs; (3) site preparation measures to include topsoil treatment, soil decompaction, erosion control, temporary irrigation systems, or other measures as appropriate; (4) methods for the removal of non-native plants (e.g., mowing, weeding, raking, herbicide application, or burning); (5) the source of all plant propagules (e.g., seed, potted nursery stock, etc. collected from within five miles of the restoration site), the quantity and species of seed or potted stock of all plants to be introduced or planted into the restoration/enhancement areas; (6) a schedule and action plan to maintain and monitor the enhancement/restoration areas, to include at minimum, qualitative annual monitoring for revegetation success and site degradation due to erosion, trespass, or animal damage for a period no less than two years; (7) as needed where sites are near trails or other access points, measures such as fencing, signage, or security patrols to exclude unauthorized entry into the restoration/enhancement areas; and (8) contingency measures such as replanting, weed control, or erosion control to be implemented if habitat improvement/restoration efforts are not</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>successful.</u></p> <p><u>Habitat restoration/enhancement will be judged successful when: (1) percent cover and species richness of native species reach 50% of cover and species richness at reference sites; and (2) the replacement vegetation has persisted at least one summer without irrigation.</u></p> <p><u>Annual monitoring reports will be prepared and submitted to CDFG and will be made available to the public to guide future mitigation planning. Monitoring reports will describe all restoration/enhancement measures taken in the preceding year; describe success and completion of those efforts and other pertinent site conditions (erosion, trespass, animal damage) in qualitative terms; and describe vegetation survival or establishment in quantitative terms.</u></p>	
	<p><u>LV 4.4-60 Bridges over the Santa Clara River shall be designed to minimize impacts to natural areas and riparian resources from associated lighting and stormwater runoff. All lighting will be designed to be directed away from natural areas (pursuant to SP-4.6-56) using shielded lights, low sodium-vapor lights, bollard lights, or other available light and glare minimization methods. Bridges will be designed to minimize normal vehicular lighting from trespassing into natural areas using side walls a minimum of 24 inches high. All stormwater from the bridges will be directed to water treatment facilities for water quality treatment.</u></p>	
	<p><u>LV 4.4-61 a. As a supplement to LV 4.4-1, LV 4.4-15, and LV 4.4-29 through LV 4.4-41, additional habitat mitigation through replacement or</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>enhancement of nesting/foraging habitat for least Bell's vireo will be provided for certain key habitat zones at higher ratios (identified as "key population areas" in Figure 4.5-86, Alternative 2 Impacts to Least Bell's Vireo Habitat³). Southern willow scrub, southern cottonwood-willow riparian, arrow weed scrub, mulefat scrub, and Mexican elderberry scrub and woodland that provide nesting/foraging habitat for least Bell's vireo in "key population areas" shall be replaced or enhanced. All permanent loss to nesting/foraging habitat in key population areas shall be mitigated at a 5:1 ratio unless otherwise authorized by CDFG or USFWS. Temporary habitat loss of foraging/nesting habitat in key population areas shall be mitigated at a 2:1 ratio. The requirements for replacing habitat by either creating new habitat or removing exotic species from existing habitat shall follow the procedures outlined in LV 4.4-1, LV 4.4-15, and LV 4.4-29 through LV 4.4-41. To replace the lost functions of habitat located adjacent to the Santa Clara River due to noise impacts, all nesting/foraging habitat within the 60 dBA sound contour (associated with development site roadway improvements) shall be considered degraded. Nesting/foraging habitat within this area shall be mitigated at a ratio of 2:1.</u></p> <p><u>b. The loss of documented occupied nesting habitat for coastal California gnatcatcher shall be mitigated. If the coastal California gnatcatcher is identified nesting on site, the applicant will acquire or preserve nesting coastal California gnatcatcher</u></p>	

³ The figure is included in the Final EIS/EIR, available for public review at CDFG's website: <http://www.dfg.ca.gov/regions/5/newhall/docs/>

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>habitat at a 3:1 ratio for impacts to documented occupied habitat, or by the ratio specified in LV 4.4-29, whichever is greater. Mitigation acquisition shall occur at an agreed-upon location as approved by the USFWS upon consultation. The applicant shall enter into a binding legal agreement regarding the preservation of occupied habitat describing the terms of the acquisition, enhancement, and management of those lands.</u></p>	
	<p><u>LV 4.4-62 At least 1,900 acres of Open Area within the Specific Plan area shall be offered for dedication to an NLMO in fee and/or by conservation easement. These 1,900 acres of the Open Area will be left as natural vegetation. Dedication of open areas lands shall be reported annually to CDFG.</u></p>	
	<p><u>LV 4.4-63 The mitigation program shall incorporate applicable principles in the interagency Federal Guidance for the Establishment, Use, and Operation of Mitigation Banks (60 FR 58605–58614) to the extent feasible and appropriate, particularly the guidance on administration and accounting. Nothing in the section 404 or section 2081 Permit or section 1605 agreement shall preclude the applicant from selling mitigation credits to other parties wishing to use those permits or that agreement for a project and/or maintenance activity included in the permits/agreement.</u></p>	
	<p><u>LV 4.4-64 Construction plans shall include necessary design features and construction notes to ensure protection of vegetation communities</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>and special-status plant and aquatic wildlife species adjacent to construction. In addition to applicable erosion control plans and performance under SCAQMD Rule 403d dust control (SCAQMD 2005), the Project stormwater pollution prevention plan (SWPPP) shall include the following minimum BMPs. Together, the implementation of these requirements shall ensure protection of adjacent habitats and wildlife species during construction. At a minimum, the following measures/restrictions shall be incorporated into the SWPPP, and noted on construction plans where appropriate, to avoid impacting special-status species during construction:</u></p> <ul style="list-style-type: none"> • <u>Avoid planting or seeding invasive species in development areas within 200 feet of native vegetation communities.</u> • <u>Provide location and details for any dust control fencing along Project boundaries (LV 4.4-43).</u> • <u>Vehicles shall not be driven or equipment operated in areas of ponded or flowing water, or where wetland vegetation, riparian vegetation, or aquatic organisms may be destroyed, except as otherwise provided for in the 404 Permit or 1603 Agreement.</u> • <u>Silt settling basins installed during the construction process shall be located away from areas of ponded or flowing water to prevent discolored, silt-bearing water from reaching areas of ponded or flowing water during normal flow regimes.</u> • <u>If a stream channel has been altered during the construction and/or maintenance operations, its low flow channel shall be returned as nearly as practical to</u> 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>pre-Project topographic conditions without creating a possible future bank erosion problem or a flat, wide channel or sluice-like area. The gradient of the streambed shall be returned to pre-Project grade, to the extent practical, unless it represents a wetland restoration area.</u></p> <ul style="list-style-type: none"> • <u>Temporary structures and associated materials not designed to withstand high seasonal flows shall be removed to areas above the high water mark before such flows occur.</u> • <u>Staging/storage areas for construction equipment and materials shall be located outside of the ordinary high water mark.</u> • <u>Any equipment or vehicles driven and/or operated within or adjacent to the stream shall be checked and maintained daily, to prevent leaks of materials that could be deleterious to aquatic life if introduced to water.</u> • <u>Stationary equipment such as motors, pumps, generators, and welders which may be located within the riverbed construction zone shall be positioned over drip pans. No fuel storage tanks shall be allowed in the riverbed.</u> • <u>No debris, bark, slash sawdust, rubbish, cement or concrete or washing thereof, oil, petroleum products, or other organic material from any construction, or associated activity of whatever nature, shall be allowed to enter into, or be placed where it may be washed by rainfall or runoff into, watercourses included in the permit. When construction operations are completed, any excess materials or debris</u> 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>shall be removed from the work area.</u></p> <ul style="list-style-type: none"> • <u>No equipment maintenance shall be done within or near any stream where petroleum products or other pollutants from the equipment may enter these areas with stream flow.</u> • <u>The operator shall install and use fully covered trash receptacles to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash.</u> • <u>The operator shall not permit pets on or adjacent to the construction site.</u> <p><u>No guns or other weapons are allowed on the construction site during construction, with the exception of the security personnel and only for security functions. No hunting shall be authorized/permitted during construction.</u></p>	
	<p><u>LV 4.4-65 The installation of new, or relocation of existing, utility poles and phone and cell towers shall be coordinated with CDFG where located in the High Country SMA and Salt Creek area. The applicant or SCE shall install utility poles, phone, and cell towers in conformance with APLIC standards for collision-reducing techniques as outlined in Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006 (APLIC 2006).</u></p>	
	<p><u>LV 4.4-66</u></p> <p><u>a. All surfaces on new antennae and phone/utility towers shall be designed and operated with anti-perching devices in conformance with APLIC standards to deter California condors and other raptors from perching. During construction the</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>area shall be kept clean of debris, such as cable, trash, and construction materials. The applicant shall collect all microtrash and litter (anything shiny, such as broken glass), vehicle fluids, and food waste from the Project area on a daily basis. Workers will be trained on the issue of microtrash: what constitutes microtrash, its potential effects on California condors, and how to avoid the deposition of microtrash.</u></p> <p><u>b. The applicant shall retain a qualified biologist with knowledge of California condors to monitor construction activities within the Project area. The resumes of the proposed biologist(s) will be provided to CDFG for concurrence. This biologist(s) will be referred to as the authorized biologist hereafter. During clearing and grubbing of construction areas, the qualified biologist shall be present at all times. During mass grading, construction sites shall be monitored on a daily basis. The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed. If condors are observed landing in the Project area, the applicant shall avoid further construction within 500 feet of the sighting until the animals have left the area, or as otherwise authorized by CDFG and USFWS. All condor sightings in the Project area will be reported to CDFG and USFWS within 24 hours of the sighting. Should condors be found roosting within 0.5 mile of the construction area, no construction activity shall occur between one hour before sunset to one hour after sunrise, or until the condors leave the area, or as otherwise directed by</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>USFWS. Should condors be found nesting within 1.5 miles of the construction area, no construction activity will occur until further authorization occurs from CDFG and USFWS.</u></p> <p>c. <u>To further protect California condor potentially foraging in the Project area over the long term from negative interactions with humans and/or artificial structures, the applicant or the JPA or the NLMO shall remove dead cattle that are found or reported within 1,000 feet of a residential or commercial development boundary. Dead cattle shall be relocated to a predetermined location within the High Country SMA or Salt Creek area. The locations where carcasses shall be placed shall be a minimum of 1,000 feet from a development area boundary. Appropriate locations for transfer of carcasses include open grasslands and oak/grassland areas where condors can readily detect carcasses and easily land and take off without encountering physical obstacles such as powerlines and other utility structures. The proposed locations would be selected and approved by the CDFG and USFWS. Pursuant to this measure, a telephone number for reporting dead cattle shall be provided and actively maintained. Any cattle carcasses transferred to the relocation areas shall be reported to the USFWS Condor group.</u></p>	
4.5 FLOODPLAIN MODIFICATIONS		
<p>The hydraulic impacts on sensitive aquatic/riparian resources in the Santa Clara River corridor due to floodplain modifications associated with construction and operation of</p>	<p>Please refer to Section 4.2, Hydrology, and Section 4.4, Biota, of this summary table for a listing of Program EIR mitigation measures pertaining to flood control.</p>	<p>With implementation of the identified mitigation measures, the proposed project's floodplain modification</p>

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<p>the proposed Landmark Village project site would be localized, and not cause significant hydrological impacts adjacent to or downstream from the Landmark Village site. On that basis, and given the limited amount of riparian habitat permanently altered by Landmark Village site development, project construction and operation would not significantly impact the unarmored threespine stickleback (<i>Gasterosteus aculeatus williamsoni</i>), arroyo toad (<i>Bufo californicus</i>), California red-legged frog (<i>Rana aurora draytonii</i>), southwestern pond turtle (<i>Clemmys marmorata pallida</i>), or two-striped garter snake (<i>Thamnophis hammondi</i>). "Floodplain modifications" associated with the proposed project include the Long Canyon Road Bridge crossing over the river, bank stabilization along portions of the banks of the river, and importing soils from off-site grading areas to remove mostly agricultural land and non-native grasslands by raising these land areas from the floodplain to allow for development and placement of bank protection.</p> <p>Three distinct habitat types are found in the river corridor including: (1) aquatic habitats, consisting of flowing or ponded water; (2) wetland habitats, consisting of emergent herbs rooted in ponded water or saturated soils along the margins of the flowing water; and (3) riparian habitat, consisting of woody vegetation along the margins of the active channel and on the floodplain. Wildlife species associated with these habitats include: (1) the endangered unarmored threespine stickleback (known to be present adjacent to Landmark Village project site); least Bell's vireo (<i>Vireo bellii pusillus</i>) (known to occur within Specific Plan), southwestern arroyo toad (known to occur upstream of the Landmark Village project site), southwestern willow flycatcher (<i>Empidonax traillii extimus</i>) (not known to be present on Landmark Village project site), and California red-legged frog (not known to be present on</p>	<p>No additional mitigation beyond that contained in Section 4.2, Hydrology, and Section 4.4, Biota, is required because no significant impacts to biological resources are anticipated due to the bank stabilization, bridge, or changes in the floodplain due to project modifications.</p>	<p>impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p>
<p>Landmark Village project site); and (2) other sensitive, but not endangered, species such as the arroyo chub (<i>Gila orcutti</i>), Santa Ana sucker (<i>Catostomus santaanae</i>), two-striped garter snake, western spadefoot toad (<i>spea hammondi</i>), and southwestern pond turtle (with the exception of the spadefoot</p>		

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<p>toad, all are known to occur within the Specific Plan). The focus of this analysis is on five sensitive species: unarmored threespine stickleback, arroyo toad, California red-legged frog, southwestern pond turtle, and two-striped garter snake.</p>		
<p>The Landmark Village project would significantly alter the visual characteristics of the Santa Clara River/SR-126 corridor. Views in Chiquito Canyon would also be significantly altered due to project implementation. While the Landmark Village project, for the most part, is not replacing prominent visual features, such as river vegetation or river bluffs, the images of residential development, roadways, bridges and other human activity would be a significant change from the existing site characteristics. Such development would also introduce sources of outdoor illumination that do not presently exist. Outdoor lighting, such as streetlights and traffic signals, are essential safety features in development projects that involve new streets and intersections, and cannot be eliminated if the proposed project is implemented. Chapters 3 and 4 of the Specific Plan contain Development Regulations and Design Guidelines, respectively, that apply to the Landmark Village project. These regulations and guidelines address grading, lighting, fencing, landscaping, signage, architecture, and site planning for subsequent subdivisions within the Newhall Ranch Specific Plan. Despite such features, the identified significant visual impacts would still result from the change in the visual character of the site from rural to urban. Consequently, such significant visual impacts would remain significant and unavoidable, as found in the Newhall Ranch Specific Plan Program EIR.</p>	<p>SP 4.7-1 In conjunction with the development review process set forth in Chapter 5 of the Specific Plan, all future subdivision maps and other discretionary permits which allow construction shall incorporate the Development Guidelines (Specific Plan, Chapter 3) and Design Guidelines (Specific Plan Chapter 4), and the design themes and view considerations listed in the Specific Plan.</p> <p>SP 4.7-2 In design of residential tentative tract maps and site planning of multifamily areas and Commercial and Mixed-Use land use designations along SR-126, the following Design Guidelines shall be utilized:</p> <ul style="list-style-type: none"> • Where the elevations of buildings will obstruct the views from SR-126 to the south, the location and configuration of individual buildings, driveways, parking, streets, signs and pathways shall be designed to provide view corridors of the river, bluffs, and the ridge lines south of the river. Those view corridors may be perpendicular to SR-126 or oblique to it in order to provide for views of passengers within moving vehicles on SR-126. 	<p>After implementation of the recommended mitigation measures, visual quality impacts would remain significant and unavoidable.</p>
	<p>SP 4.7-2 (continued)</p> <ul style="list-style-type: none"> • The Community Park between SR-126 and the Santa Clara River shall be designed to promote views from SR-126 of the river, bluffs and ridge lines to the south of the river. • Residential Site Planning Guidelines set forth in Section 4.3.1, Residential and 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>Architectural Guidelines, set forth [in] Section 4.4.1, Residential, shall be employed to ensure that the views from SR-126 are aesthetically pleasing and that views of the river, bluffs and ridge lines south of the river are preserved to the extent practicable.</p> <ul style="list-style-type: none"> • Mixed-Use and the Commercial Site Planning Guidelines set forth in Section 4.3.2 and Architectural Guidelines set forth Section 4.4.2 shall be incorporated to the extent practicable in the design of the Riverwood Village Mixed-Use and Commercial land use designations to ensure that the views from SR-126 are aesthetically pleasing and to preserve views of the river, bluffs and ridge lines south of the river. • Landscape improvements along SR-126 shall incorporate the Landscape Design Guidelines, set forth in Section 4.6 in order to ensure that the views from SR-126 are aesthetically pleasing and to preserve views of the river, bluffs and ridge lines south of the river. 	
4.7 TRAFFIC/ACCESS		
<p>For purpose of the traffic analysis, the proposed project is contemplated to be constructed in three phases. Phase 1 is estimated to generate approximately 4,950 average daily traffic (ADT) with approximately 375 tripends occurring in the AM peak hour and approximately 505 tripends occurring in the PM peak hour. Phase 2 in combination with Phase 1 is estimated to generate approximately 20,700 total ADT with approximately 1,400 tripends occurring in the AM peak hour and approximately 1,900 tripends occurring in the PM peak hour. Phase 3 is estimated to generate an additional 21,200 ADT for a total of 41,900 ADT at project buildout. At buildout, the project would generate approximately 2,900 tripends in the AM peak</p>	<p>SP 4.8-1 The applicants for future subdivision maps which permit construction shall be responsible for funding and constructing all on-site traffic improvements except as otherwise provided below. The obligation to construct improvements shall not preclude the applicants' ability to seek local, state, or federal funding for these facilities. <i>(All on-site traffic improvements included as part of the Landmark Village project will be funded and/or constructed by the project applicant.)</i></p> <p>SP 4.8-2 Prior to the approval of each subdivision map</p>	<p>With implementation of the identified mitigation measures, the proposed project's traffic/access impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p>

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<p>hour and 4,100 tripends in the PM peak hour. Approximately 30 percent of the Phase 1 and 2 tripends would be internal tripends. The remaining tripends would be for trips off site.</p> <p>The traffic impact analysis, using the County of Los Angeles performance standards, found that the project at buildout would result in a significant impact at the following intersections:</p> <p>Phases 1 and 2 Combined</p> <ul style="list-style-type: none"> • Wolcott/SR-126 • Commerce Center Drive/SR-126 <p>Phase 3 (Project Buildout)</p> <ul style="list-style-type: none"> • Interstate 5 (I-5) Southbound Ramps/SR-126 • Wolcott/SR-126 • Commerce Center Drive/SR-126 • Chiquito-Long Canyon/SR-126 <p>A traffic signal warrant is met at the Chiquito Canyon Road/Long Canyon Road/SR-126 intersection during Phase 2 of the project, and at the Long Canyon Road/"A" Street intersection prior to project buildout conditions, thereby necessitating a traffic signal at these locations.</p> <p>Mitigation measures are recommended that would reduce the level of impact at all of these intersections to less than significant.</p>	<p>which permits construction, the applicant for that map shall prepare a transportation performance evaluation which shall indicate the specific improvements for all on-site roadways which are necessary to provide adequate roadway and intersection capacity as well as adequate right-of-way for the subdivision and other expected traffic. Transportation performance evaluations shall be approved by Los Angeles County Department of Public Works according to standards and policies in effect at that time. The transportation performance evaluation shall form the basis for specific conditions of approval for the subdivision. <i>(This EIR, Section 4.7, provides the required transportation performance evaluation and, in combination with Section 1.0, Project Description, indicates the on-site roadway improvements necessary to provide adequate capacity.)</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 TRAFFIC/ACCESS (continued)		
<p>No significant impact to CMP intersections or CMP freeway segments, or on SR-126 or State Route 23 (SR-23) in Ventura County would occur.</p> <p>Significant cumulative traffic impacts in the project study area would occur at the following locations absent mitigation:</p> <p>Project Buildout with Related Projects</p> <ul style="list-style-type: none"> • I-5 Southbound Ramps/SR-126 • I-5 Northbound Ramps/SR-126 • Wolcott/SR-126 • Chiquito-Long Canyon/SR-126 <p>Long Range Cumulative Forecast</p> <ul style="list-style-type: none"> • I-5 between Rye Canyon Road and Magic Mountain Parkway • I-5 between Magic Mountain Parkway and Valencia Boulevard • I-5 between Valencia Boulevard and McBean Parkway • I-5 between Pico Canyon Road/Lyons Avenue and Calgrove Avenue <p>In addition, buildout of the entire Newhall Ranch Specific Plan would contribute to potentially significant cumulative impacts at the following SR-126 intersections in the community of Piru and City of Fillmore in Ventura County:</p> <ul style="list-style-type: none"> • Center Street and Telegraph Road (SR-126) • E Street and Ventura Street (SR-126) • El Dorado Road and Ventura Street <p>Identified mitigation measures would reduce the project’s contribution to the cumulative impacts in Los Angeles County to a level below significant. Mitigation measures also are proposed that would reduce the Specific Plan buildout traffic’s contribution to potentially significant cumulative impacts at SR-126 intersections in Piru and Fillmore in Ventura County to a level below significant.</p>	<p>SP 4.8-3 The applicants for future subdivisions shall provide the traffic signals at the 15 locations labeled “B” through “P” in Figure 4.8-17 [of the Newhall Ranch Specific Plan Final EIR] as well as any additional signals warranted by future subdivision design. Signal warrants shall be prepared as part of the transportation performance evaluations noted in Mitigation 4.8-2 [of the Newhall Ranch Specific Plan Final EIR]. <i>(Two of the intersections within the Landmark Village site will be signalized intersections, including the one intersection depicted as signalized by Specific Plan Figure 4.8-17, Long Canyon Road/A Street. This EIR, Section 4.7, in combination with the traffic report presented in Recirculated EIR Appendix 4.7, provides the required signal warrants.)</i></p> <p>SP 4.8-4 All development within the Specific Plan shall conform to the requirements of the Los Angeles County Transportation Demand Management (TDM) Ordinance. <i>(The Landmark Village project would conform to the County’s TDM Ordinance.)</i></p> <p>SP 4.8-5 The applicants for all future subdivision maps which permit construction shall consult with the local transit provider regarding the need for, and locations of, bus pull-ins on highways within the Specific Plan area. All bus pull-in locations shall be approved by the Department of Public Works, and approved bus pull-ins shall be constructed by the applicant. <i>(Final locations of bus pull-ins will be coordinated with the local transit provider and the Department of Public Works and constructed in conjunction with the project.)</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 TRAFFIC/ACCESS (continued)		
<p><u>Under existing plus project conditions, which is a hypothetical scenario that assumes immediate full project buildout and does not account for cumulative traffic growth and future roadway improvements and, therefore, is presented for information purposes only, the project would result in significant impacts at the following intersections and freeway segments:</u></p> <ul style="list-style-type: none"> • <u>I-5 Northbound Ramps & SR-126 [impacts mitigated by EIR mitigation]</u> • <u>Wolcott & SR-126 [impacts mitigated by EIR mitigation]</u> • <u>Commerce Center Drive & SR-126 [impacts mitigated by EIR mitigation]</u> • <u>Chiquito Canyon/Long Canyon Road & SR-126 [impacts mitigated by EIR mitigation]</u> • <u>Southbound I-5 between Calgrove & SR-14 (Caltrans) [impacts mitigated by I-5 Improvement Project]</u> <p><u>As noted, the impacts identified under this scenario would be mitigated to a level below significant with implementation of EIR mitigation improvements, or improvements presently being implemented.</u></p>	<p>SP 4.8-6 Prior to the recordation of the first subdivision map which permits construction, the applicant for that map shall prepare a transportation performance evaluation which shall determine the specific improvements needed to each off-site arterial and related costs in order to provide adequate roadway and intersection capacity for the expected Specific Plan and General Plan buildout traffic trips. The transportation performance evaluation shall be based on the Master Plan of Highways in effect at that time and shall be approved by the Los Angeles County Department of Public Works. The applicant shall be required to fund its fair share of improvements to these arterials, as stated on Table 4.8-18 [of the Newhall Ranch Specific Plan Final EIR]. The applicants total funding obligation shall be equitably distributed over the housing units and non-residential building square footage (i.e., Business Park, Visitor-Serving, Mixed-Use, and Commercial) in the Specific Plan, and shall be a fee to be paid to the County and/or the City at each building permit. For off-site areas within the County unincorporated area, the applicant may construct improvements for credit against or in lieu of paying the fee. <i>(This EIR, Section 4.7, provides the referenced transportation performance evaluation, including a determination of the improvements necessary to each off-site arterial, as well as appropriate fair-share funding requirements.)</i></p>	
	<p>SP 4.8-7 Each future performance evaluation which shows that a future subdivision map will create significant impacts on SR-126 shall analyze the need for additional travel lanes on SR-126. If adequate lane capacity is not available at the</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>time of subdivision, the applicant of the subdivision shall fund or construct the improvements necessary to serve the proposed increment of development. Construction or funding of any required facilities shall not preclude the applicant's ability to seek state, federal, or local funding for these facilities. <i>(The future performance evaluation presented in this EIR, Section 4.7, determined that the Landmark Village project would cause a significant impact at the SR-126/I-5 interchange at buildout and would be responsible for its fair share of the improvements to this interchange.). (This improvement has since been completed.)</i></p> <p>SP 4.8-8 Project-specific environmental analysis for future subdivision maps which allow construction shall comply with the requirements of the <i>Congestion Management Program</i> in effect at the time that subdivision map is filed. <i>(The future performance evaluation presented in this EIR, Section 4.7, complies with the requirements of the Congestion Management Program presently in effect.)</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 TRAFFIC/ACCESS (continued)		
	<p>SP 4.8-9 Prior to the recordation of the first subdivision map which permits construction, the applicant for that map shall prepare a transportation evaluation including all of the Specific Plan land uses which shall determine the specific improvements needed to the following intersections with SR-126 in the City of Fillmore and community of Piru in Ventura County:</p> <p>“A,” “B,” “C,” “D,” and “E” Streets, Old Telegraph, Olive, Central, Santa Clara, Mountain View, El Dorado Road, and Pole Creek (Fillmore), and Main/Torrey and Center (Piru). The related costs of those intersection improvements and the project’s fair share shall be estimated based upon the expected Specific Plan traffic volumes. The transportation performance evaluation shall be based on the Los Angeles County Master Plan of Highways in effect at that time and shall be approved by the Los Angeles County Department of Public Works. The applicant’s total funding obligation shall be equitably distributed over the housing units and non-residential building square footage (i.e., Business Park, Visitor Center, Mixed Use, and Commercial) in the Specific Plan, and shall be a fee to be paid to the City of Fillmore and the County of Ventura at each building permit. <i>(This EIR, Section 4.7, in combination with the traffic reports presented in Recirculated EIR Appendix 4.7, provides the required transportation evaluation of SR-126 intersections in Ventura County. As discussed in the EIR, Subsection 9.b.(3), buildout of the Newhall Ranch Specific Plan would contribute to potentially significant cumulative impacts at the intersection of Center Street and Telegraph Road (SR-126) in the Ventura County community of Piru. Pursuant to</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 TRAFFIC/ACCESS (continued)		
	<p>SP 4.8-9 (continued)</p> <p><i>mitigation measure LV-4.7-242, below, the applicant will pay to Ventura County its fair-share of the costs to implement recommended roadway improvements at the Center Street/Telegraph Road intersection. Additionally, as discussed in the EIR, Subsection 9.b.(4), buildout of the Newhall Ranch Specific Plan would contribute to potentially significant cumulative impacts at two intersections in the Ventura County City of Fillmore. Pursuant to Mitigation Measure LV-4.7-201, the applicant will pay \$300,000 to the City of Fillmore as its agreed-upon fair-share of the costs to construct transportation-related improvements deemed necessary by the City of Fillmore.)</i></p> <p>SP 4.8-10 The Specific Plan is responsible to construct or fund its fair-share of the intersections and interchange improvements indicated on Table 4.8-18 [of the Newhall Ranch Specific Plan Final EIR]. Each future transportation performance evaluation required by Mitigation 4.8-2 [of the Newhall Ranch Specific Plan Final EIR] which identifies a significant impact at these locations due to subdivision map-generated traffic shall address the need for additional capacity at each of these locations. If adequate capacity is not available at the time of subdivision map recordation, the performance evaluation shall determine the improvements necessary to carry Specific Plan generated traffic, as well as the fair share cost to construct such improvements. If the future subdivision is conditioned to construct a phase of improvements which results in an overpayment of the fair-share cost of the improvement, then an appropriate</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 TRAFFIC/ACCESS (continued)		
	<p>SP 4.8-10 (continued) adjustment (offset) to the fees paid to Los Angeles County and/or City of Santa Clarita pursuant to Mitigation Measure 4.8-6 above shall be made. <i>(The transportation performance evaluation presented in this EIR, Section 4.7, fulfills the requirements of this Specific Plan mitigation measure relative to Landmark Village.)</i></p> <p>SP 4.8-11 The applicant of the Newhall Ranch Specific Plan shall participate in an Interstate 5 developer fee program, if adopted by the Board of Supervisors for the Santa Clarita Valley. <i>(The Board of Supervisors has not adopted a developer fee program for the Santa Clarita Valley. However, the applicant will participate in funding its fair share of mainline improvements in accordance with Mitigation Measures LV-4.7-17 through LV-4.7-20) and, to that end, the applicant and Caltrans have prepared a funding agreement under which the applicant will pay to Caltrans the project's share of the I-5 Improvement Project. See Final Revised EIR, Appendix F4.7.)</i></p> <p>SP 4.8-12 The applicant of the Newhall Ranch Specific Plan shall participate in a transit fee program, if adopted for the entire Santa Clarita Valley by Los Angeles County and City of Santa Clarita. <i>(The applicant will be required to pay the applicable transit fees in place at the time of building permit issuance.)</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 TRAFFIC/ACCESS (continued)		
	<p>SP 4.8-13 Prior to the approval of each subdivision map which permits construction, the applicant for that map shall prepare a traffic analysis approved by the Los Angeles County Department of Public Works. The analysis will assess project and cumulative development (including an existing plus cumulative development scenario under the County’s Traffic Impact Analysis Report Guidelines (TIA) and its Development Monitoring System (DMS)). In response to the traffic analysis, the applicant may construct off-site traffic improvements for credit against, or in lieu of paying, the mitigation fees described in Mitigation Measure 4.8-6 [of the Newhall Ranch Specific Plan Final EIR]. If future subdivision maps are developed in phases, a traffic study for each phase of the subdivision map may be submitted to determine the improvements needed to be constructed with that phase of development. <i>(The traffic analysis presented in this EIR, Section 4.7, fulfills the requirements of this Specific Plan mitigation measure.)</i></p> <p>LV 4.7-1 The project applicant shall construct all on-site local roadways and intersections to County of Los Angeles codes and regulations unless provided otherwise on the Vesting Tentative Tract Map when approved.</p> <p>LV 4.7-2 The main access for Landmark Village will be provided from SR-126 via the existing intersections of Wolcott Way and Chiquito Canyon Road. Future phases of the NRSP will provide access to and from Landmark Village via Long Canyon Road. Unless an updated long-range study is prepared which demonstrates that the intersections will</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 TRAFFIC/ACCESS (continued)		
	<p>LV 4.7-2 (continued) adequately handle the area buildout traffic as at grade intersections, adequate road right of way shall be reserved for future grade separated interchanges at these two locations, as approved in the NRSP.</p> <p>LV 4.7-3 80. Wolcott/SR-126 – Prior to occupancy of the first dwelling unit, the project applicant shall: (i) re-stripe the southbound shared left-turn/through lane to an exclusive through lane (resulting in 1 southbound left-turn lane, 1 southbound through lane, and 1 southbound right turn lane); (ii) add a northbound left turn lane and 2 northbound right turn lanes (resulting in 1 northbound left turn lane, 1 northbound through lane and 2 northbound right turn lanes); (iii) add an eastbound right turn lane (resulting in 1 eastbound left turn lane, 2 eastbound through lanes, and 1 eastbound right turn lane); and (iv) add a second westbound left turn lane (resulting in 2 westbound left turn lanes, 2 westbound through lanes, and 1 westbound right turn lane). Said improvements are to be completed at their ultimate design locations and operational to the satisfaction of the County of Los Angeles Department of Public Works (Department of Public Works) concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. Signals shall be modified to the satisfaction of the Department of Public Works.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 TRAFFIC/ACCESS (continued)		
	<p>LV 4.7-4 The Landmark Village traffic study is based on the Santa Clarita Valley Consolidated Traffic Model and assumes the following roadway improvements will be in place with Phase I of the project. In accordance with the County of Los Angeles Department of Public Works Traffic Impact Analysis Report Guidelines (TIARG), the following improvements shall be made a condition of approval for the project to be completed at their ultimate design locations and operational to the satisfaction of the Department of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed:</p> <ul style="list-style-type: none"> • Reconstruct the Golden State (I-5) Freeway/SR-126 Freeway interchange by adding access to eastbound SR-126 from southbound I-5, access to southbound I-5 from westbound SR-126, direct access to northbound I-5 from westbound SR-126, and widening bridge to accommodate 8 lanes. <i>[This measure has been completed.]</i> • Construct Newhall Ranch Road segment between Vanderbilt Way and Copper Hill Drive/Rye Canyon Road. <i>[This measure has been completed.]</i> 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 TRAFFIC/ACCESS (continued)		
	<p>LV 4.7-5 110. Chiquito Canyon/Long Canyon/SR-126 – Prior to occupancy of the 501st dwelling unit or a comparable amount of dwelling units plus commercial square feet (to be determined based on a conversion factor of 2.5 dwelling units per thousand square feet), the project applicant shall add: (i) a northbound left turn lane and a northbound right turn lane (resulting in 1 northbound left turn lane, 1 northbound through lane, and 1 northbound right turn lane); (ii) a southbound left turn lane (resulting in 1 southbound left turn lane and 1 shared southbound through lane/southbound right turn lane); and (iii) a westbound left turn lane (resulting in 1 westbound left turn lane, 2 westbound through lanes, and 1 westbound right turn lane). Said improvements are to be completed and operational to the satisfaction of the Department of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.</p> <p>LV 4.7-6 7. I-5 Southbound Ramps/SR-126 – Prior to exceeding occupancy of 1,444 dwelling units and 100,000 commercial square feet (or fewer dwelling units and a greater amount of commercial square feet, to be calculated based on a conversion factor of 2.5 dwelling units per thousand square feet of commercial space), the project applicant shall add a third westbound through lane (resulting in 3 westbound through lanes and a free flow westbound right turn lane) to be completed at its ultimate design location and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 TRAFFIC/ACCESS (continued)		
	<p>LV 4.7-6 (continued) pavement, and the temporary traffic detection loops, if needed. Signals shall be modified to the satisfaction of the Department of Public Works. [This measure has been completed.]</p> <p>LV 4.7-7 80. Wolcott/SR-126 – Prior to exceeding occupancy of 1,444 dwelling units and 100,000 commercial square feet (or fewer dwelling units and a greater amount of commercial square feet, to be calculated based on a conversion factor of 2.5 dwelling units per thousand square feet of commercial space), the project applicant shall add: (i) a second southbound left turn lane (resulting in 2 southbound left turn lanes, 1 southbound through lane, and 1 southbound right turn lane); (ii) a second eastbound left turn lane and a third eastbound through lane (resulting in 2 eastbound left turn lanes, 3 eastbound through lanes, and 1 eastbound right turn lane); and (iii) a third westbound through lane (resulting in 2 westbound left turn lanes, 3 westbound through lanes, and 1 westbound right turn lane). Said improvements are to be completed at their ultimate design locations and operational to the satisfaction of the Department of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. Signals shall be modified to the satisfaction of the Department of Public Works. <i>(While the Project Applicant is required by this measure to construct each of the designated improvements, the Landmark Village project’s fair-share responsibility for the improvements identified in this mitigation measure</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 TRAFFIC/ACCESS (continued)		
	<p>LV 4.7-7 (continued) <i>is 62.1 percent [Phase 1, 12.2 percent; Phase 2, 19.3 percent; and, Project Buildout, 30.6 percent], with the exception of the third eastbound through lane required as part of improvement (ii); the project's fair-share for that improvement is 100%. This fair-share information is provided to facilitate any future action by the Project applicant to seek participatory funding from other development unrelated to the Landmark Village project.)</i></p> <p>LV 4.7-8 110. Chiquito Canyon/Long Canyon Road/SR-126 – Prior to exceeding occupancy of 1,444 dwelling units and 100,000 commercial square feet (or fewer dwelling units and a greater amount of commercial square feet, to be calculated based on a conversion factor of 2.5 dwelling units per thousand square feet of commercial space), the project applicant shall add: (i) a second northbound through lane, and a second northbound right turn lane (resulting in 1 northbound left turn lane, 2 northbound through lanes, and 2 northbound right turn lanes); (ii) convert the southbound shared through lane/right-turn lane to a southbound through lane and add a southbound right turn lane (resulting in 1 southbound left turn lane, 1 southbound through lane, and 1 southbound right turn lane); (iii) add an eastbound right turn lane (resulting in 1 eastbound left turn lane, 2 eastbound through lanes, and 1 eastbound right turn lane); and (iv) add a second westbound left turn lane (resulting in 2 westbound left turn lanes, 2 westbound through lanes, and 1 westbound right turn lane). Signals shall be modified to the satisfaction of the Department of Public Works. Alternatively, the project applicant shall</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 TRAFFIC/ACCESS (continued)		
	<p>LV 4.7-8 (continued) construct a grade separated crossing to the satisfaction of the County of Los Angeles Department of Public Works. Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.</p> <p>LV 4.7-9 7. I-5 SB Ramps/SR-126 – The project applicant shall fund its fair share of the cost to add: (i) a fourth southbound lane (resulting in 2 southbound left-turn lanes, 1 shared southbound left turn lane/southbound right turn lane, and 1 dedicated southbound right turn lane); (ii) a third and fourth eastbound through lane (resulting 4 four eastbound through lanes and 1 free flow eastbound right turn lane); and (iii) a fourth westbound through lane (resulting in 4 westbound through lanes and 1 free flow westbound right turn lane). Signals shall be modified to the satisfaction of the Department of Public Works. (Project share = 38.3 percent. The project may elect to shall pay by phase as each phase gets recorded: Phase I= 8.3 percent, Phase II= 8.1 percent and Phase III= 21.9 percent). Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. [This measure, with the exception of striping a fourth westbound through lane and striping a shared southbound left-turn/right-turn lane, has been completed.]</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 TRAFFIC/ACCESS (continued)		
	<p>LV 4.7-10 8. I-5 NB Ramps/SR-126 –The project applicant shall fund its fair share of the cost to: (i) add a third northbound left turn lane (resulting in 3 northbound left turn lanes and 1 northbound right turn lane); (ii) add a third and fourth eastbound through lane (resulting in 4 eastbound through lanes and 1 free flow eastbound right turn lane); and (iii) add a third westbound through lane (for 3 westbound through lanes and 1 free flow westbound right turn lane). Signals shall be modified to the satisfaction of the Department of Public Works. (Project Share = 20.8 percent. The project may elect to<u>shall</u> pay by phase as each phase gets recorded: Phase I= 4.7 percent, Phase II= 4.0 percent and Phase III= 12.1 percent). Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. [This measure has been completed.]</p> <p>LV 4.7-11 81, 82, 83 and 94. Commerce Center/SR-126 – The project applicant shall fund its fair share of the cost to construct a Grade Separated Interchange. (Project Share = 33.8 percent. The project may elect to<u>shall</u> pay by phase as each phase gets recorded: Phase I= 6.6 percent, Phase II= 9.1 percent and Phase III= 18.1 percent).</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 TRAFFIC/ACCESS (continued)		
	<p>LV 4.7-12 110. Chiquito Canyon/Long Canyon Road/SR-126 – The project applicant shall fund its fair share of the cost to add: (i) a second northbound left turn lane (resulting in 2 northbound left turn lanes, 2 northbound through lanes and 2 northbound right turn lanes); (ii) a second southbound left turn lane, and second and third southbound through lanes (resulting in 2 southbound left turn lanes, 3 southbound through lanes and 1 southbound right turn lane); (iii) a second eastbound left turn lane and a third eastbound through lane (resulting in 2 eastbound left turn lanes, 3 eastbound through lanes, and 1 eastbound right turn lane); and (iv) a third westbound through lane (resulting in 2 westbound left turn lanes, 3 westbound through lanes, and 1 westbound right turn lane) Alternatively, the project applicant shall construct a grade separated crossing to the satisfaction of the County of Los Angeles Department of Public Works (Project Share = 62 percent. The project applicant may elect to shall pay its fair-share by phase as each phase is recorded: Phase I= 3 percent, Phase II= 16 percent and Phase III= 43 percent). Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.</p> <p>LV 4.7-13 Applicable transit mitigation fees shall be paid at the time of building permit issuance, unless modified by an approved transit mitigation agreement.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 TRAFFIC/ACCESS (continued)		
	<p>LV 4.7-14 Prior to the commencement of project construction activities, the applicant shall institute construction traffic management controls in accordance with the California Department of Transportation (Caltrans) traffic manual. These traffic management controls shall include measures determined on the basis of site-specific conditions including, as appropriate, the use of construction signs (e.g., "Construction Ahead") and delineators, and private driveway and cross-street closures.</p> <p>LV 4.7-15 Traffic signals shall be designed and installed or designed and funded, as specified below, at each of the intersections listed below. The design and the construction of the traffic signals shall be the sole responsibility of the project. The signals shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed, and prior to the development milestones described below:</p> <p>Phase I: Wolcott Way at Henry Mayo Drive (SR-126) (signal modification), prior to the first lift of paving on Wolcott Way or SR-126, whichever comes first;</p> <p>Phase II: Chiquito Canyon Road and Long Canyon Road (Future) at Henry Mayo Drive (SR-126) (design and install), prior to the first lift of paving on Chiquito or SR-126, whichever comes first;</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 TRAFFIC/ACCESS (continued)		
	<p>LV 4.7-15 (continued)</p> <p>Phase II: School West Driveway at "A" Street (TT 53108) (design and install), prior to rough grade certification for the school lot (Lot 309); Additionally, final school/park site plans and detailed street signing and striping plans for along the school/park frontages, as well as the signal plan for the traffic signal, should be prepared and submitted to Public Works' Traffic and Lighting Division for review and approval;</p> <p>Phase II: School/Park East Driveway at "A" Street (TT 53108), the project applicant shall prepare the traffic signal design plans and secure adequate funds with the Los Angeles County Department of Public Works for the full construction of the traffic signal. The intersection shall be monitored for the installation of the signal once the school is fully occupied with 750 students; and,</p> <p>Phase III: Long Canyon Road at "Y" Street and "A" Street (TT 53108) (design and install), prior to the issuance of the certificate of occupancy for building(s) on the fire station.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 TRAFFIC/ACCESS (continued)		
	<p>LV 4.7-16 The developer shall use its best efforts to coordinate with the Castaic Union School District (CUSD) in the development of the school's traffic circulation plan and drop-off/pick-up procedures. The Traffic and Lighting Division recommends that a mechanism for enforcement and levying of noncompliance penalties be included in the plan. The traffic circulation plan should include the distribution of informational packets containing the approved drop-off/pick-up procedures to the parents/guardians of students of the school, and trip reduction strategies such as carpooling and increased bus operations, with specific average vehicle ridership goals for students and staff members, to minimize traffic generation in the area.</p> <p>LV-4.7-17 The project applicant shall contribute its fair-share of the costs of adding one high occupancy vehicle ("HOV") lane in each direction to the segment of I-5 between Rye Canyon Road and Magic Mountain Parkway consistent with the percentages shown in Table 4.7-34 of this EIR.</p> <p>LV-4.7-18 The project applicant shall contribute its fair-share of the costs of adding one HOV lane in each direction to the segment of I-5 between Magic Mountain Parkway and Valencia Boulevard consistent with the percentages shown in Table 4.7-34 of this EIR.</p> <p>LV-4.7-19 The project applicant shall contribute its fair-share of the costs of adding one HOV lane in each direction to the segment of I-5 between Valencia Boulevard and McBean Parkway consistent with the percentages shown in Table 4.7-34 of this EIR.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 TRAFFIC/ACCESS (continued)		
	<p>LV-4.7-20 The project applicant shall contribute its fair-share of the costs of adding one HOV lane in each direction <u>and one truck lane in the southbound direction</u> to the segment of I-5 between Pico Canyon Road/Lyons Avenue and Calgrove Avenue consistent with the percentages shown in Table 4.7-34 of this EIR.</p> <p>LV 4.7-21 Concurrent with issuance of the first building permit for Landmark Village, the project applicant shall submit a one-time payment of \$300,000 to the City of Fillmore (City) in Ventura County to fund transportation-related improvements in the City consistent with the March 2000 agreement entered into between The Newhall Land and Farming Company and the City. <i>(This measure implements in part the provisions of Specific Plan mitigation measure SP 4.8-9.)</i></p> <p>LV 4.7-22 Concurrent with the issuance of each Newhall Ranch Specific Plan building permit, the project applicant shall pay to the County of Ventura that development’s pro-rata share of the entire Newhall Ranch Specific Plan’s fair-share (nine percent, or one percent in the case of Landmark Village [130 ADT of 11,000]) of the costs to implement the following roadway improvements at the intersection of Center Street and Telegraph Road (SR-126) in the Ventura County community of Piru: (1) <u>Install channelizers and extension striping to prevent left-turn movements from Center Street to eastbound SR-126; Re-stripe the Center Street southbound approach lane resulting in separate left and right turn lanes;</u> (2) Add a westbound right turn deceleration lane to Telegraph Road; and (3) Install a traffic signal at the intersection when warranted. <i>(This measure implements in</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<i>part the provisions of Specific Plan mitigation measure SP 4.8-9.)</i>	
<p>Development of the Landmark Village site over a 4 to 5 year^{54-month} period would involve clearing and grading of the ground surface, trucks importing approximately 5.8 million cubic yards of fill material, and the building of the proposed improvements. These activities typically involve the temporary use of heavy equipment, smaller equipment, and motor vehicles, which generate both continuous and episodic noise. This noise would primarily affect the occupants of on-site uses constructed in the earlier phases of the development (assuming that the site is occupied in sections as other portions are still under construction) and would be audible to occupants of the off-site Travel Village Recreational Vehicle (RV) Park when construction activities occur.</p> <p>Grading operations at the site and the off-site borrow sites would occur over a 4-6 week^{year} period. Because the Adobe Canyon borrow site is not in close proximity to existing sensitive receptors, grading operations at this site would not result in a significant noise impact. The construction noise would not be audible within the community of Val Verde due to intervening distances and topography.</p> <p>On-site occupants who would have an uninterrupted line of sight to the construction noise sources could be exposed to increased noise levels during construction, resulting in potentially significant impacts unless mitigated. Noise impacts from these construction activities would be less than significant at the Travel Village RV Park. However, occupants of the RV Park could be exposed to excessive noise levels <u>for a short period of time during construction of a limited segment of the utility corridor-construction</u>, resulting in significant impacts as construction activity occurs adjacent to the Park. Although Mitigation is recommended to reduce these impacts, <u>such that the resulting noise levels may continue to would not exceed the applicable thresholds, resulting in a significant and unavoidable impact.</u> On-site construction noise would not be audible at the community of Val Verde due to distances between the site and the community of Val Verde, the</p>	<p>SP 4.9-1 All construction activity occurring on the Newhall Ranch Specific Plan site shall adhere to the requirements of the "County of Los Angeles Construction Equipment Noise Standards," County of Los Angeles Ordinance No. 11743, §12.08.440 as identified in [Newhall Ranch Specific Plan Program EIR] Table 4.9-3.</p> <p>SP 4.9-2 Limit all construction activities near occupied residences to between the hours of 6:30 AM and 8:00 PM, and exclude all Sundays and legal holidays pursuant to County Department of Public Works, Construction Division standards.</p> <p>SP 4.9-3 When construction operations occur adjacent to occupied residential areas, implement appropriate additional noise reduction measures that include changing the location of stationary construction equipment, shutting off idling equipment, notifying adjacent residences in advance of construction work, and installing temporary acoustic barriers around stationary construction noise sources.</p> <p>SP 4.9-4 Locate construction staging areas on site to maximize the distance between staging areas and occupied residential areas.</p> <p>SP 4.9-5 Where new single-family residential buildings are to be constructed within an exterior noise contour of 60 dB(A) CNEL or greater, or where any multi-family buildings are to be constructed within an exterior noise contour of 65 dB(A) CNEL or greater, an acoustic analysis shall be completed prior to approval of building permits. The acoustical analysis shall show that the building is designed so that interior noise levels resulting from outside sources will be no greater than 45 dB(A) CNEL.</p>	<p>Should pile driving be required to construct the Long Canyon Road bridge, and should the project applicant not find it feasible to complete the pile driving prior to occupancy of on-site noise-sensitive uses within 5,000 feet of the pile driving, a short-term significant and unavoidable significant construction noise impact would occur. Furthermore, construction within the utility corridor immediately north of Travel Village RV Park could expose occupants of the RV Park to excessive noise levels during its construction. Even with the mitigation measures in place the resulting noise levels may continue to exceed the applicable thresholds, resulting in a significant and unavoidable impact.</p>

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<p>intervening topography that would attenuate on-site noise, and traffic noise along SR-126 that would “drown out” on-site construction noise to the south.</p>		
<p>In the event construction of the Long Canyon Road Bridge requires pile driving into the bed of the Santa Clara River, the noise levels associated with these activities would be audible to occupants of on-site uses constructed prior to the bridge, and would exceed County noise thresholds within 5,000 feet of the pile-driving activities. Therefore, if it is not feasible to complete the pile driving prior to occupancy of on-site noise sensitive residential uses located within 5,000 feet of the pile-driving activities, <u>mitigation is included that would require the project applicant to use pile drilling techniques or a hydrohammer or an equivalent method, which would result in substantially reduced noise levels, in those circumstances in which sensitive receptors are located within 5,000 feet of pile driving activities. With this mitigation, pile driving related noise impacts would be reduced to less than significant levels.</u> a short term significant and unavoidable construction noise impact would occur. If pile drilling were utilized instead of pile driving, short term noise impacts would be significant and unavoidable at noise sensitive uses located within 1,600 feet of the pile drilling activities.</p> <p>Sound levels from long-range traffic volumes along SR-126 and on the proposed “A” Street would exceed the thresholds of significance for noise sensitive uses proposed along these roadways within the project boundaries. With implementation of the recommended mitigation measures, noise impacts at these noise sensitive uses would be reduced to levels below significant.</p> <p>The project would construct a fire station which would result in periodic use of sirens and air horns during emergency responses. However, given that the fire station is located in a commercial land use location (not adjacent to residential uses) and sirens and air horns are intermittent noise sources, no significant noise impacts are expected with the construction and operation of the fire station.</p>	<p>SP 4.9-6 For single-family residential lots located within the 60 dB(A) CNEL or greater noise contour, an acoustic analysis shall be submitted prior to tentative approval of the subdivision. The acoustic analysis shall show that exterior noise in outdoor living areas (e.g., back yards, patios, etc.) will be reduced to 60 dB(A) CNEL or less. (The noise impacts analysis presented in this EIR Section 4.8, and the accompanying noise calculations presented in Appendix 4.8, provide the acoustic analysis required by this mitigation measure.)</p> <p>SP 4.9-7 For multi-family residential lots located within the 65 dB(A) CNEL or greater noise contour, an acoustic analysis shall be submitted prior to tentative approval of the subdivision. The acoustic analysis shall show that exterior noise in outdoor living areas (e.g., back yards, patios, etc.) will be reduced to 65 dB(A) CNEL or less. (The noise impacts analysis presented in this EIR Section 4.8, and the accompanying noise calculations presented in Appendix 4.8, provide the acoustic analysis required by this mitigation measure.)</p> <p>SP 4.9-8 For school sites located within the 70 dB(A) CNEL or greater noise contour, an acoustic analysis shall be submitted prior to tentative approval of the subdivision. The acoustic analysis shall show that noise at exterior play areas will be reduced to 70 dB(A) CNEL or less. (The noise impacts analysis presented in this EIR Section 4.8, and the accompanying noise calculations presented in Appendix 4.8, provide the acoustic analysis required by this mitigation measure.)</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<p>Upon buildout, the project would not result in <u>significant</u> point-source noise impacts to off-site locations. However, future traffic along SR-126, with and without the project, would cause mobile source noise levels at the Travel Village RV Park to exceed 70.0 decibels on an A-weighted scale (dB(A)) community noise equivalent level (CNEL) by 2010³. Pursuant to Mitigation Measure 4.9-14 from the Newhall Ranch Specific Plan Program EIR, once noise levels reach 70 dB(A) CNEL at certain locations on the RV Park site, the project applicant will be required to mitigate highway noise levels at Travel Village to 70 dB(A) or less.</p> <p>Point sources of noise from the proposed on-site parks would include ball fields used during evening hours by the school and/or intramural events that could last for more than several hours. Noises typical of such uses would be from parking lots, participants and observers, loud speakers, etc. Noise levels from these activities could exceed the County Noise Ordinance at residences within Landmark Village that are proposed in close proximity to the school and the public parks, resulting in a significant impact on the residents unless mitigated.</p>	<p>SP 4.9-9 All residential air conditioning equipment installed within the Newhall Ranch Specific Plan site shall adhere to the requirements of the County of Los Angeles Residential Air Conditioning and Refrigeration Noise Standards, County of Los Angeles Ordinance No. 11743, §12.08.530.</p> <p>SP 4.9-10 All stationary and point sources of noise occurring on the Newhall Ranch Specific Plan site shall adhere to the requirements of the County of Los Angeles Ordinance No. 11743, §12.08.390 as identified in Table 4.9-2, County of Los Angeles Exterior Noise Standards for Stationary and Point Noise Sources.</p> <p>SP 4.9-11 Loading, unloading, opening, closing, or other handling of boxes, crates, containers, building materials, garbage cans or similar objects between the hours of 10:00 PM and 6:00 AM in such a manner as to cause a noise disturbance is prohibited in accordance with the County of Los Angeles Ordinance No. 11743, §12.08.460.</p> <p>SP 4.9-12 Loading zones and trash receptacles in commercial and Business Park areas shall be located away from adjacent residential areas, or provide attenuation so that noise levels at residential uses do not exceed the standards identified in §12.08.460 of the Ordinance No. 11743.</p> <p>SP 4.9-13 <u>Where residential lots are located with direct lines of sight to the Magic Mountain Theme Park, an acoustic analysis shall be submitted to show that exterior noise on the residential lots generated by activities at the park do not exceed the standards identified in Section 12.08.390 of the Ordinance No. 11743 as identified in Table 4.9-2, County of Los Angeles Exterior Noise Standards for Stationary and</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>Point Noise Sources. (This mitigation measure is not applicable to the Landmark Village project because the project does not include lots located with direct lines-of-sight to the Magic Mountain Theme Park.) Not applicable.</u></p> <p>SP 4.9-14 After the time that occupancy of uses on the Newhall Ranch Specific Plan site occurs, AND when noise levels at the Travel Village RV Park reach 70 dB(A) CNEL at locations where recreational vehicles are inhabited, the applicant shall construct a noise abatement barrier to reduce noise levels at the RV Park to 70 dB(A) CNEL or less.</p>	
	<p>SP 4.9-15 Despite the absence of a significant impact, applicants for all building permits of Residential, Mixed-Use, Commercial, and Business Park land uses (Project) shall pay to the Santa Clara Elementary School District, prior to issuance of building permits, the project's pro rata share of the cost of a sound wall to be located between SR-126 and the Little Red School House. The project's pro rata share shall be determined by multiplying the estimated cost of the sound wall by the ratio of the project's estimated contribution of ADTs on SR-126 at the Little Red School House (numerator) to the total projected cumulative ADT increase at that location (denominator). The total projected cumulative ADT increase shall be determined by subtracting the existing trips on SR-126 from the projected cumulative trips as shown in Table 1 of Topical Response 5: Traffic Impacts to State and Local Roads in Ventura County after adding the total Newhall Ranch ADT traveling west of the City of Fillmore. (Prior to the issuance of building permits for Landmark Village, the project applicant shall calculate and pay to the Santa Clara Elementary School District the pro-rata share of the cost to</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>construct the subject sound wall.) See, EIR Section 4.5, which determined that the Landmark Village project at buildout in 2010 would generate 105 ADTs on SR-126 at the Little Red School House (EIR Table 4.7-22). Section 4.5 also determined that the <u>buildout 2010</u> ADT on SR-126 at the Little Red School House would be 35,000 (EIR Table 4.7-22).</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.8 NOISE (continued)		
	<p>SP 4.9-16 Despite the absence of a significant impact, the applicant for all building permits of Residential, Mixed-Use, Commercial and Business Park land uses (Project) shall participate on a fair-share basis in noise attenuation programs developed and implemented by the City of Moorpark to attenuate vehicular noise on SR-23 just north of Casey Road for the existing single-family homes which front SR-23. The mitigation criteria shall be to reduce noise levels to satisfy state noise compatibility standards. The project's pro rata share shall be determined by multiplying the estimated cost of attenuation by the ratio of the project's estimated contribution of ADTs on SR-23 north of the intersection of SR-23 and Casey Road (numerator) to the total projected cumulative ADT increase at that location (denominator). The total projected cumulative ADT increase shall be determined by subtracting the existing trips on SR-23 north of Casey Road from the projected cumulative trips as shown in Topical Response 5 – Traffic Impacts of the Program EIR to State and Local Roads in Ventura County after adding the total Newhall Ranch ADT traveling south of the City of Fillmore. (Prior to the issuance of building permits for Landmark Village, the project applicant shall calculate and pay to the City of Moorpark noise attenuation program the project's pro rata share of the estimated cost of attenuation.) See, EIR Section 4.5, which determined that the Landmark Village project at buildout in 20103 would generate 10 ADTs on SR-23 north of Casey Road (EIR Table 4.7-22). Section 4.5 also determined that the 20103 ADT on SR-23 at north of Casey Road would be 8,000 (EIR Table 4.7-22).</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.8 NOISE (continued)		
	<p>SP 4.9-17 Not applicable.</p> <p>LV 4.8-1 The project applicant, or its designee, shall not undertake construction activities that can generate noise levels in excess of the County's Noise Ordinance on Sundays or legal holidays.</p> <p>LV 4.8-2 When construction operations occur in close proximity to on- or off-site occupied residences, and if it is determined by County staff during routine construction site inspections that the construction equipment could generate a noise level at the residences that would be in excess of the Noise Ordinance, the project applicant or its designee shall implement appropriate additional noise reduction measures. These measures shall include, among other things, changing the location of stationary construction equipment, shutting off idling equipment, notifying residents in advance of construction work, and installing temporary acoustic barriers around stationary construction noise sources.</p> <p>LV 4.8-3 Prior to construction of the utility corridor north of the Travel Village RV Park, the project applicant or its designee shall erect solid construction and continuous temporary noise barriers south of the utility corridor north of the RV Park without blocking ingress/egress at the Park. Prior to issuance of the construction permit for the utility corridor, a qualified acoustic consultant shall be retained to specify the placement and height of the noise barriers in order to maximize their effectiveness in attenuating noise levels. Construction activities north of the RV Park shall comply with the Los Angeles County Noise Ordinance; stationary</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.8 NOISE (continued)		
	<p>LV 4.8-3 (continued)</p> <p>construction equipment shall be placed as far away from occupied spaces within the RV Park, and equipment shall not be permitted to idle. A qualified acoustic consultant shall be retained to monitor construction noise once a month at occupied RV spaces to ensure noise levels are in compliance with the County’s Noise Ordinance for the duration of the construction.</p> <p>LV 4.8-4 To the extent feasible, in lieu of conventional pile driving, the project developer shall utilize cast-in-place drilled-hole piles, or hydrohammer pile driving equipment with noise reduction, or an alternative methodology that would achieve equivalent noise level reductions, <u>in lieu of pile driving if residential units are constructed in those circumstances in which pile-driving activities would occur within 5,000 feet of the Long Canyon Bridge prior to any pile driving activity sensitive receptors.</u></p> <p>Pile drilling is an alternate method of pile installation where a hole is drilled into the ground up to the required elevations depth and concrete is then cast into it. The estimated noise level of pile drilling at 50 feet is 80 to 95 dB(A) Equivalent Continuous Noise Level (L_{eq}) compared to 90 to 105 dB(A) L_{eq} of for conventional pile driving.⁴ Therefore, pile drilling generally produces noise levels approximately 10 to 15 decibels lower than pile driving. (Revisions to the VTTM/Final Site Plan may ultimately require modifications to the mitigation measure and the referenced lotting</p>	

⁴ U.S. Environmental Protection Agency, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, December 1971.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>including the height and location of berms and walls.)</p> <p><u>Hydrohammer pile driving equipment uses an enclosed hydraulically driven hammer with noise reduction. Noise can be reduced to less than 80 dB(A) at 25 feet, 70 dB(A) at 80 feet, 65 dB(A) at 150 feet, and 60 dB(A) at 250 feet.</u></p>	
	<p>LV 4.8-5 To mitigate noise impacts on Lots 8 to 12 and Lots 20 to 24 from traffic along “A” Street, the project applicant or its designee shall, prior to occupancy, construct a minimum 6-foot wall along the northern property lines of these lots. <i>(Revisions to the VTTM/Final Site Plan may ultimately require modifications to the mitigation measure and the referenced lotting including the height and location of berms and walls.)</i></p> <p>LV 4.8-6 To mitigate noise impacts on Lots 115 to 128, 146 to 152, 188, and 313 from traffic along “A” Street, the project applicant or its designee shall, prior to occupancy, construct a minimum 5-foot wall along the northern property lines of these lots. The 5-foot wall shall wrap around the entire length of the eastern boundary of Lot 152. <i>(Revisions to the VTTM/Final Site Plan may ultimately require modifications to the mitigation measure and the referenced lotting including the height and location of berms and walls.)</i></p> <p>LV 4.8-7 To mitigate noise impacts on Lots 325, 326, 349, and 350 (condominiums and apartments east of Wolcott Road) from traffic along SR-126, the project applicant or its designee shall, prior to occupancy, construct a 7-foot berm/solid wall at top of slope along northern edge of Lots 326, 325, 349 and 350, to the northwestern corner of Lot 349. The berm/wall shall be continuous with no breaks or gaps. <i>(Revisions to the</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><i>VTTM/Final Site Plan may ultimately require modifications to the mitigation measure and the referenced lotting including the height and location of berms and walls.)</i></p>	
	<p>LV 4.8-8 To mitigate noise impacts on Lots 343 and 377 (condominium) and on Lot 376 (apartment east of Long Canyon Road) from SR-126, the project applicant or its designee shall, prior to occupancy, construct an 8-foot berm/solid wall along the northern edge of Lots 380, 381, 379, and 360. The berm/wall shall be continuous with no openings or gaps. <i>(Revisions to the VTTM/Final Site Plan may ultimately require modifications to the mitigation measure and the referenced lotting including the height and location of berms and walls.)</i></p> <p>LV 4.8-9 Prior to occupancy of Lot 346 (condominiums west of Wolcott Road), the project applicant or its designee, shall construct an 8-foot berm/solid wall along the eastern boundary of Lot 346 to mitigate delivery truck traffic noise from Lot 347 (mixed use commercial). <i>(Revisions to the VTTM/Final Site Plan may ultimately require modifications to the mitigation measure and the referenced lotting including the height and location of berms and walls.)</i></p> <p>LV 4.8-10 To mitigate noise impacts on Lot 346 (condominiums west of Wolcott Road) from SR-126 the project applicant or its designee shall, prior to occupancy, construct a 10-foot berm/solid wall along the northern edge of Lot 346 from its northeastern corner to a point approximately 325 feet to the west along the lot line. From this point, a 10-foot berm/solid wall shall be constructed through Lot 383 (open space) to the edge of the Caltrans right-of-way where the wall shall continue westerly to the northwestern corner of Open Space Lot 383.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>The wall shall be continuous with no openings or gaps. <i>(Revisions to the VTTM/Final Site Plan</i></p>	
	<p>LV 4.8-10 (continued) <i>may ultimately require modifications to the mitigation measure and the referenced lotting including the height and location of berms and walls.)</i></p> <p>LV 4.8-11 Prior to occupancy of Lot 346 (condominiums west of Wolcott Road), the project applicant or its designee, shall construct an 8-foot berm/solid wall along the eastern boundary of Lot 346 to mitigate delivery truck traffic noise from Lot 347 (mixed use commercial). <i>(Revisions to the VTTM/Final Site Plan may ultimately require modifications to the mitigation measure and the referenced lotting including the height and location of berms and walls.)</i></p> <p>LV 4.8-12 To mitigate delivery truck and other noises from the commercial center west of Long Canyon Road on Lot 354 (apartments west of Long Canyon Road), the project applicant or its designee shall, prior to occupancy, construct an 8-foot berm/solid wall along the eastern perimeter of Lot 354. <i>(Revisions to the VTTM/Final Site Plan may ultimately require modifications to the mitigation measure and the referenced lotting including the height and location of berms and walls.)</i></p>	
	<p>LV 4.8-13 To mitigate noise impacts on Lot 354 (apartments west of Long Canyon Road) from SR-126, the project applicant or its designee shall, prior to occupancy, construct a 9-foot berm/solid wall along the northern boundary of Lot 354, and along the northern 200 feet of the western lot line. To preserve views of the Santa Clara River, 5/8-inch Plexiglas or transparent material with equivalent or better acoustic</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>value may be incorporated into the wall design. In lieu of constructing the 9-foot berm/solid wall, the parcel shall be developed so that frequent use areas, including balconies, are placed toward the interior of the lot and fully shielded from noise from SR-126 by the apartment structure. <i>(Revisions to the VTTM/Final Site Plan may ultimately require modifications to the mitigation measure and the referenced lotting including the height and location of berms and walls.)</i></p> <p>LV 4.8-14 To mitigate noise impacts on Lot 376 (apartments east of Long Canyon Road) from delivery truck and other noise from the commercial center proposed east of Long Canyon Road, the project applicant or its designee shall, prior to occupancy, construct an 8-foot berm/solid wall along the western boundary of Lot 376. <i>(Revisions to the VTTM/Final Site Plan may ultimately require modifications to the mitigation measure and the referenced lotting including the height and location of berms and walls.)</i></p>	
	<p>LV 4.8-15 Residences within mixed-use commercial areas shall be discouraged within 500 feet of the centerline of SR-126. Residences that do occur within mixed use commercial lots shall be set back as far as possible from SR-126, Wolcott Road, Long Canyon Road, and "A" Street in order to minimize the need for acoustic insulation of the units. When the plot plan for the commercial center is complete, acoustic analyses shall be conducted by a qualified acoustic consultant to ensure that interior noise levels of any residences within the commercial center can be feasibly reduced to 45 dB(A).</p> <p>LV 4.8.16 Balconies with direct lines of sight to SR-126, Wolcott Road, Long Canyon Road, and/or "A"</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>Street shall be discouraged from exposure to exterior noise levels greater than the 60 dB(A) CNEL standard for single-family residences or the 65 dB(A) CNEL standard for multi-family residences through architectural or site design. Alternatively, balconies shall be enclosed by solid noise barriers, such as 3/8-inch glass or 5/8-inch Plexiglas to a height specified by a qualified noise consultant.</p>	
	<p>LV 4.8-17 All single-family and multi-family structures, including multi-family units incorporated into commercial centers, within 500 feet of SR-126 and all residential units with direct lines of sight to SR-126, Wolcott Road, Long Canyon Road, and/or "A" Street shall incorporate the following into the exterior wall that faces onto those roadways:</p> <ul style="list-style-type: none"> (a) All windows, both fixed and operable, shall consist of either double-strength glass or double-paned glass. All windows facing sound waves generated from the mobile source noise shall be manufactured and installed to specifications that prevent any sound from window vibration caused by the noise source. (b) Doors shall be solid core and shall be acoustically designed with gasketed stops and integral drop seals. (c) If necessitated by the architectural design of a structure, special insulation or design features shall be installed to meet the required interior ambient noise level. <p>LV 4.8-18 Air conditioning units shall be installed to serve all living areas of all residences incorporated into commercial centers, and those with direct lines of sight to SR-126, and/or "A" Street so that windows may remain closed without</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<p>Implementation of the Landmark Village project would generate both construction and operational air pollutant emissions. Construction-related emissions would be generated by on-site stationary sources, on- and off-road heavy-duty construction vehicles, and construction worker vehicles. Operation-related emissions would be generated by on-site and off-site stationary sources and by mobile sources.</p> <p>During project construction, emissions of carbon monoxide (CO), volatile organic compounds (VOC), and oxides of nitrogen (NO_x) <u>and respirable particulate matter (PM₁₀), including fine particulate matter (PM_{2.5}),</u> would exceed the thresholds of significance recommended by the South Coast Air Quality Management District (SCAQMD) for all but one construction subphase.⁵ The analysis of local significance threshold (LST) impacts suggests that PM₁₀ emissions, <u>including PM_{2.5},</u> could exceed the limitations in SCAQMD Rule 403. While the nitrogen dioxide (NO₂) concentrations exceed the LST thresholds, the California Ambient Air Quality Standards (CAAQS) would be exceeded only if (1) the actual background concentrations were as high as those on which the LSTs thresholds are based during the worst-case construction day;; (2) the amount of construction activity (e.g., number and types of equipment, hours of operation) assumed in this analysis actually occurred;; and (3) the meteorological conditions in the data set used in the dispersion modeling analysis occurred in the vicinity of the project site on the worst-case construction day.</p> <p>At project buildout, operational emissions of CO, VOC, NO_x, and PM₁₀ <u>including PM_{2.5},</u> would exceed SCAQMD thresholds, primarily due to mobile source emissions in the summertime and to mobile source and wood burning fireplace emissions in</p>	<p>compromising the comfort of the occupants.</p> <p><u>Of the nine Specific Plan mitigation measures, three of the measures, either partially or wholly, are not feasible and/or applicable to the Landmark Village project. Because the Specific Plan would be built out over an estimated 20-year period, it was unknown at the time the Newhall Ranch Specific Plan Program EIR was prepared what technological developments or regulatory requirements may take place over the course of Specific Plan build out that may affect the identification and implementation of mitigation measures. Thus, it was unknown at the time of Specific Plan approval whether a particular mitigation action would be feasible at the time of implementation. Additionally, because the Specific Plan mitigation measures would apply to each tract map within the Specific Plan without distinction, certain measures would not be applicable to each subdivision. For example, mitigation identified for "Business Park" uses is not applicable to Landmark Village, which contains no Business Park uses as identified in the Specific Plan. As such, certain adopted Specific Plan mitigation measures included the qualifying phrase "if found applicable and feasible for that subdivision" in order to address these contingencies.</u></p> <p><u>Consistent with the approach taken in the Newhall Ranch Specific Plan Program EIR, the eight mitigation measures applicable to two Specific Plan mitigation measures containing implementation actions that are either not applicable or feasible relative to the Landmark Village project (i.e., SP 4.10-7 and SP 4.10-9) have been replaced by project specific mitigation measures LV 4.9-6 and LV 4.9-8, respectively. These two measures, which are based on the adopted Specific Plan mitigation measures, have been revised to eliminate the qualifying phrase "if found applicable and feasible for that subdivision," and updated</u></p>	<p>No feasible mitigation exists that would reduce construction and operational emissions to below the SCAQMD's recommended thresholds of significance. The project's construction-related emissions of VOC, NO_x, and PM₁₀, and operation-related emissions of CO, VOC, and NO_x are considered significant and unavoidable.</p>

⁵ The RDEIR identified PM₁₀ construction emissions as exceeding SCAQMD thresholds. See Table 4.9-17. The omission of PM₁₀ from the listing of emissions in this text was an inadvertent error.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<p>the wintertime.</p>	<p><u>for applicability to the Landmark Village project and consistency with current SCAQMD regulations, and to reflect existing technologies. The basis for the revisions is provided in <i>(italicized parenthetical text)</i> following the Specific Plan mitigation measure below. In addition, Specific Plan mitigation measure SP 4.10-6 is replaced by LV 4.9-5 to eliminate the qualifying phrase "if found applicable and feasible for that subdivision." Lastly, Specific Plan mitigation measure SP 4.10-13 is entirely not applicable to Landmark Village as it relates to on-site subterranean parking structures, which are not a part of Landmark Village. Deleted text is marked with a strikethrough while additions are marked through underlined text. It is assumed that With these limited exceptions, all Specific Plan mitigation measures will be implemented in full unless otherwise indicated.</u></p> <p>SP 4.10-1 The Specific Plan will provide Commercial and Service Uses in close proximity to residential subdivisions. <i>(The Landmark Village project provides Commercial and Service Uses in close proximity to residential subdivisions).</i></p> <p>SP 4.10-2 The Specific Plan will locate residential uses in close proximity to Commercial Uses, Mixed-Uses, and Business Parks. <i>(The Landmark Village project locates residential uses in close proximity to Commercial Uses and Mixed Uses).</i></p> <p>SP 4.10-3 Bus pull-ins will be constructed throughout the Specific Plan site. <i>(The Landmark Village project provides for bus pull-ins at designated locations).</i></p> <p>SP 4.10-4 Pedestrian facilities, such as sidewalks, and community regional, and local trails, will be provided throughout the Specific Plan site. <i>(Pedestrian facilities, such as sidewalks, bike paths, and trails, will be constructed throughout the Landmark Village project, with future connections to other on-site and off-site future developments and</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><i>designated trails).</i></p> <p>SP 4.10-5 Roads with adjacent trails for pedestrian and bicycle use will be provided throughout the Specific Plan site connecting the individual Villages and community. <i>(Roads with adjacent trails for pedestrian and bicycle use will be provided throughout the Landmark Village project site with future connections to future developments within Newhall Ranch).</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.9 AIR QUALITY (continued)		
<p>No project land use would be exposed to CO hotspots and the project would not cause a CO hotspot at other locations of sensitive receptors in the project study area. In addition, population growth attributed to the project is consistent with the approved Newhall Ranch Specific Plan and is within growth forecasts contained in the 2001–2004 Regional Transportation Plan (2001–2004 RTP) prepared by the Southern California Association of Governments (SCAG). The 2001–2004 RTP forms the basis for the land use and transportation control portions of the 2003–2007 AQMP. Because the project is within the growth forecasts for the region, it would, consequently, be consistent with the 2003–2007 AQMP, indicating that it would not jeopardize attainment of state and federal ambient air quality standards in the Santa Clarita Valley or throughout the South Coast Air Basin (Basin).</p> <p>Mitigation measures would be implemented that would reduce construction-related and operational-related emissions to the maximum extent feasible. However, no feasible mitigation exists that would reduce the project’s construction-related emissions of CO, VOC, NO_x, or PM₁₀, <u>including PM_{2.5}</u>, to below the SCAQMD’s recommended thresholds of significance.⁶ <u>Additionally,</u>—No feasible mitigation exists to reduce the project’s operational emissions of CO, VOC, NO_x, or PM₁₀, <u>including PM_{2.5}</u>, to less than significant. Therefore, the project’s construction-related and operation-related emissions would be considered significant and unavoidable.</p>	<p>SP 4.10-6 The applicant of future subdivisions shall implement all rules and regulations adopted by the Governing Board of the SCAQMD which are applicable to the development of the subdivision (such as Rule 402 – Nuisance, Rule 403 – Fugitive Dust, Rule 1113 – Architectural Coatings) and which are in effect at the time of development. The purpose of Rule 403 is to reduce the amount of particulate matter entrained in the ambient air as a result of man-made fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or man-made condition capable of generating fugitive dust such as the mass and remedial grading associated with the project as well as weed abatement and stockpiling of construction materials (i.e., rock, earth, gravel). Rule 403 requires that grading operations either (1) take actions specified in Tables 1 and 2 of the Rule for each applicable source of fugitive dust and take certain notification and record keeping actions, or (2) obtain an approved Fugitive Dust Control Plan. A complete copy of the SCAQMD’s Rule 403 Implementation Handbook, which has been included in Appendix 4.10, provides guideline tables to demonstrate the typical mitigation program and record keeping required for grading operations (Tables 1 and 2 and sample record-keeping chart). The record keeping is accomplished by on-site construction personnel, typically the construction superintendent.</p>	

⁶ ~~CO emissions would only exceed SCAQMD’s threshold of significance for six weeks during the 54-month construction period, and PM₁₀ emissions would only exceed the thresholds of significance during project on- and off-site grading operations.~~

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.9 AIR QUALITY (continued)		
	<p>SP 4.10-6 (continued)</p> <p>Each future subdivision proposed in association with the Newhall Ranch Specific Plan shall implement the following if found applicable and feasible for that subdivision:</p> <p>Grading</p> <ul style="list-style-type: none"> a. Apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for 10 days or more). b. Replace groundcover in disturbed areas as quickly as possible. c. Enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications, to exposed piles (i.e., gravel, sand, dirt) with 5 percent or greater silt content. d. Water active sites at least twice daily. e. Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph. f. Monitor for particulate emissions according to district-specified procedures. g. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least 2 feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer) in accordance with the requirements of CVC Section 23114. 	
<p>The SCAQMD's criteria of annual emission reductions of one percent for CO, VOC, NO_x, PM₁₀, <u>including PM_{2.5}</u>, and Sulfur Oxide (SO_x), were used to assess cumulative air quality impacts. Through site planning, proposed design features, and with implementation of the mitigation measures recommended</p>	<p>SP 4.10-6 (continued)</p> <p>Paved Roads</p> <ul style="list-style-type: none"> h. Sweep paved streets at the end of the day if visible soil material is carried onto adjacent public paved roads (recommend 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<p>in Section 4.9, the project would reduce wintertime emissions for CO, VOC, NO_x, and PM₁₀<u>including PM_{2.5}</u>, by <u>9.6, 21.2, 14.2, and 9.3</u>, 37.8, 83.1, 14.0, and 45.4 percent, respectively. During the summer, these emissions would be reduced by <u>10.1, 22.4, 13.9 and 9.2</u>, 9.7, 15.5, 12.0, and 9.6 percent, respectively. Therefore, cumulative air quality impacts would not be significant given the cumulative project thresholds of significance found in the SCAQMD's California Environmental Quality Act (CEQA) Air Quality Handbook,⁷ and the fact that the project's population forecast is consistent with the SCAQMD's 2003 AQMP. However, because the project's operational-related CO, VOC, NO_x, and PM₁₀<u> including PM_{2.5}</u>, emissions would exceed the SCAQMD's project-specific thresholds of significance, even with all feasible mitigation, project implementation would result in cumulatively significant and unavoidable air quality impacts. This is considered a conservative and "worst-case" approach for estimating the project's cumulative air quality impacts.</p>	<p>water sweepers with reclaimed water).</p> <ul style="list-style-type: none"> i. Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip. <p>Unpaved Roads</p> <ul style="list-style-type: none"> j. Apply water three times daily, or non-toxic soil stabilizers according to manufacturers' specifications, to all unpaved parking or staging areas or unpaved road surfaces. k. Reduce traffic speeds on all unpaved roads to 15 mph or less. l. Pave construction roads that have a traffic volume of more than 50 daily trips by construction equipment, 150 total daily trips for all vehicles. m. Pave all construction access roads at least 100 feet on to the site from the main road. n. Pave construction roads that have a daily traffic volume of less than 50 vehicular trips. 	
	<p>SP 4.10-7 Prior to the approval of each future subdivision proposed in association with the Newhall Ranch Specific Plan, each of the construction emission reduction measures indicated below (and in Tables 11-2 and 11-3 of the SCAQMD's <i>CEQA Air Quality Handbook</i>, as amended) shall be implemented if found applicable and feasible for that subdivision:</p> <p>On-Road Mobile Source Construction Emissions</p> <ul style="list-style-type: none"> a. Configure construction parking to 	

⁷ The *CEQA Air Quality Handbook* is in the process of being revised and replaced by an *Air Quality Analysis Guidance Handbook (Air Quality Guidance Handbook)*. As of May 2006, the SCAQMD has revised Chapters 1-9 (www.aqmd.gov/ceqa/hdbk.html), but it is not yet completed.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>minimize traffic interference.</p> <p>b. Provide temporary traffic controls when construction activities have the potential to disrupt traffic to maintain traffic flow (e.g., signage, flag person, detours).</p> <p>c. Schedule construction activities that affect traffic flow to off-peak hours (e.g., between 7:00 PM and 6:00 AM and between 10:00 AM and 3:00 PM).</p> <p>d. Develop a trip reduction plan to achieve a 1.5 average vehicle ridership (AVR) for construction employees.</p> <p>e. Implement a shuttle service to and from retail services and food establishments during lunch hours.</p>	
	<p>SP 4.10-7 (continued)</p> <p>On-Road Mobile Source Construction Emissions (continued)</p> <p>f. Develop a construction traffic management plan that includes the following measures to address construction traffic that has the potential to affect traffic on public streets:</p> <ul style="list-style-type: none"> - Rerouting construction traffic off congested streets; - Consolidating truck deliveries; and - Providing temporary dedicated turn lanes for movement of construction trucks and equipment on and off of the site. <p>g. Prohibit truck idling in excess of two minutes.</p> <p>Off-Road Mobile Source Construction Emissions</p> <p>h. Use methanol-fueled pile drivers. <u>Infeasible as written due to the present market for alternative fuels for use in construction</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>equipment. Revised to provide greater flexibility in the selection of alternative fuel types.)</u></p> <ul style="list-style-type: none"> i. Suspend use of all construction equipment operations during second stage smog alerts. j. Prevent trucks from idling longer than two minutes. k. Use electricity from power poles rather than temporary diesel-powered generators. l. Use electricity from power poles rather than temporary gasoline-powered generators. m. Use methanol- or natural gas-powered mobile equipment instead of diesel. <u>(Infeasible as written due to the present market for alternative fuels for use in construction equipment. Revised to provide greater flexibility in the selection of alternative fuel types.)</u> n. Use propane- or butane-powered on-site mobile equipment instead of gasoline. <u>(Infeasible as written due to the present market for alternative fuels for use in construction equipment. Revised to provide greater flexibility in the selection of alternative fuel types.)</u> 	
	<p>SP 4.10-8 The applicant of future subdivisions shall implement all rules and regulations adopted by the Governing Board of the SCAQMD which are applicable to the development of the subdivision (such as Rule 402 – Nuisance, Rule 461 – Gasoline Transfer And Dispensing, Rule 1102 – Petroleum Solvent Dry Cleaners, Rule 1111 – NO_x Emissions from Natural Gas-Fired, Fan-Type Central Furnaces, Rule 1138 – Control</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>Of Emissions From Restaurant Operations, Rule 1146 – Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters) and which are in effect at the time of occupancy permit issuance.</p> <p>SP 4.10-9 Prior to the approval of each future subdivision proposed in association with the Newhall Ranch Specific Plan, each of the operational emission reduction measures indicated below (and in Tables 11-6 and 11-7 of the SCAQMD’s CEQA <i>Air Quality Handbook</i>, as amended) shall be implemented if found applicable and feasible for that subdivision.</p> <p>a. Include satellite telecommunications centers in residential subdivisions (Removed as growth of internet allows residents to telecommute from home using personal computers.) <u>No longer applicable as growth of internet allows residents to telecommute from home using personal computers.)</u></p> <p>On Road Mobile Source Operational Emissions</p> <p>Residential Uses</p> <p>b. Establish shuttle service from residential subdivision to commercial core areas. <u>(Infeasible as written; shuttle services to be provided by commercial uses and public transit.)</u></p> <p>c. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters).</p>	
	<p>SP 4.10-9 (continued)</p> <p>d. Construct off-site pedestrian facility improvements, such as overpasses and wider sidewalks.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none"> e. Include retail services within or adjacent to residential subdivisions. f. Provide shuttles to major rail transit centers or multi-modal stations. <u>(Infeasible as written; shuttle services to be provided by commercial uses and public transit.)</u> g. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.). h. Synchronize traffic lights on streets impacted by development. i. Construct, contribute, or dedicate land for the provision of off-site bicycle trails linking the facility to designated bicycle commuting routes. <p>Commercial Uses</p> <ul style="list-style-type: none"> j. Provide preferential parking spaces for carpools and vanpools and provide 7'2" minimum vertical clearance in parking facilities for vanpool access. k. Implement on-site circulation plans in parking lots to reduce vehicle queuing. l. Improve traffic flow at drive-throughs by designing separate windows for different functions and by providing temporary parking for orders not immediately available for pickup. m. Provide video-conference facilities. <u>(No longer applicable as growth of internet allows employees to attend videoconference from home using personal computers.)</u> n. Set up resident worker training programs to improve job/housing balance. 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.9 AIR QUALITY (continued)		
	<p>SP 4.10-9 (continued)</p> <ul style="list-style-type: none"> o. Implement home dispatching system where employees receive routing schedule by phone instead of driving to work. <i>(Removed - No longer applicable as growth of internet allows employers to establish websites where such information can be posted and accessed by employees at home on personal computers.)</i> p. Develop a program to minimize the use of fleet vehicles during smog alerts (for business not subject to Regulation XV (now Rule 2202) or XII). <i>(Not applicable to Landmark Village project as the commercial uses to be developed in this subdivision will be neighborhood supporting uses that do not utilize commercial vehicle fleets.) Not applicable.</i> q. <u>Use low-emissions fleet vehicles:</u> <ul style="list-style-type: none"> - <u>TLEV</u> - <u>ULEV</u> - <u>LEV</u> - <u>ZEV</u> <i>(Not applicable to Landmark Village project as the commercial uses to be developed in this subdivision will be neighborhood supporting uses that do not utilize commercial vehicle fleets.) Not applicable.</i> r. Reduce employee parking spaces for those businesses subject to Regulation XV (now Rule 2202). <i>(Rule 2202 applies to employers with more than 250 employees on a single worksite. The Landmark Village project does not include Business Park or similar uses that would generate significant levels of employment at a single location.) Not applicable.</i> 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>applicable.</p> <p>s. Implement a lunch shuttle service from a worksite(s) to food establishments. <u>(Consistent with Rule 2202, this measure applies to employers with more than 250 employees on a single worksite. The Landmark Village project would not include the types of uses that would generate significant levels of employees at a single location. Therefore, this measure is not applicable to Landmark Village.)</u></p> <p>t. Implement compressed workweek schedules where weekly work hours are compressed into fewer than five days.</p> <ul style="list-style-type: none"> - 9/80 - 4/40 - 3/36 <p><u>(The Landmark Village project does not include the types of uses that would generate significant levels of employment at a single location. Therefore, this measure is considered not applicable.)</u>Not applicable.</p> <p>u. Develop a trip reduction plan to achieve 1.5 AVR for businesses with less than 100 employees or multi-tenant worksites. <u>(This measure is considered not applicable, because the uses proposed by the Landmark Village project are not suited for imposition of a trip reduction plan. In addition, the requirement to achieve a specific AVR has been ruled unlawful and, therefore, is no longer recommended.)</u>Not applicable.</p> <p>v. Utilize satellite offices rather than regular worksite to reduce VMT. (Removed) <u>No longer applicable as growth of internet allows employees to work from home on personal computers.)</u></p> <p>w. Establish a home-based telecommuting</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>program. <u>(No longer applicable as growth of internet allows employees to work from home on personal computers.)</u></p> <p>x. Provide on-site child care and after-school facilities or contribute to off-site development within walking distance. <u>(Consistent with Rule 2202, this measure applies to employers with more than 250 employees on a single worksite. The Landmark Village project would not include the types of uses that would generate significant levels of employees at a single location. Therefore, this measure is not applicable to Landmark Village.)</u></p> <p>y. Require retail facilities or special event centers to offer travel incentives such as discounts on purchases for transit riders.</p> <p>z. Provide on-site employee services such as cafeterias, banks, etc. <u>(Consistent with Rule 2202, this measure applies to employers with more than 250 employees on a single worksite. The Landmark Village project would not include the types of uses that would generate significant levels of employees at a single location. Therefore, this measure is not applicable to Landmark Village.)</u></p> <p>aa. Establish a shuttle service from residential core areas to the worksite. <u>(Infeasible as written due to the unlimited scope of worksite locations.)</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.9 AIR QUALITY (continued)		
	<p>SP 4.10-9 (continued)</p> <p><i>Commercial Uses (continued)</i></p> <ul style="list-style-type: none"> ab. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters). ac. Implement a pricing structure for single-occupancy employee parking and/or provide discounts to ridesharers. ad. Include residential units within a commercial project. ae. Utilize parking in excess of code requirements as on-site park-n-ride lots or contribute to construction of off-site lots. af. Any two of the following: <ul style="list-style-type: none"> - Construct off-site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on-site improvements, such as bicycle paths. - Include bicycle parking facilities, such as bicycle lockers and racks. - Include showers for bicycling employees' use. ag. Any two of the following: <ul style="list-style-type: none"> - Construct off-site pedestrian facility improvements, such as overpasses, wider sidewalks. - Construct on-site pedestrian facility improvements, such as building access which is physically separated from street and parking lot traffic and walk paths. - Include showers for pedestrian employees' use. 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.9 AIR QUALITY (continued)		
	<p>SP 4.10-9 (continued)</p> <p>Commercial Uses (continued)</p> <p>ah. Provide shuttles to major rail transit stations and multi-modal centers. <u>(Infeasible as written due to the unlimited scope of shuttle routes.)</u></p> <p>ai. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.).</p> <p>aj. Charge visitors to park. <u>(Infeasible as written due to the business implications of establishing parking fees at certain commercial uses (e.g., grocery stores, big-box retailers).)</u></p> <p>ak. Synchronize traffic lights on streets impacted by development.</p> <p>al. Reschedule truck deliveries and pickups to off-peak hours.</p> <p>am. Set up paid parking systems where drivers pay at walkup kiosk and exit via a stamped ticket to reduce emissions from queuing vehicles.</p> <p>an. Require on-site truck loading zones.</p> <p>ao. Implement or contribute to public outreach programs.</p> <p>ap. Require employers not subject to Regulation XV (now Rule 2202) to provide commuter information area.</p> <p>Business Park Uses</p> <p>aq. <u>Provide preferential parking spaces for carpools and vanpools and provide 7'2" minimum vertical clearance in parking facilities for vanpool access. (This mitigation measure is not applicable to the Landmark Village project. The measure refers to preferential parking spaces for carpools and vanpools in Business Park uses. The Landmark Village project does not propose a</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>Business Park.)Not applicable.</u></p> <p>ar. Implement on-site circulation plans in parking lots to reduce vehicle queuing. <u>(This mitigation measure is not applicable to the Landmark Village project. The measure refers to improved circulation within Business Park parking lots. The Landmark Village project does not propose a Business Park.)ot applicable.</u></p> <p>as. Set up resident worker training programs to improve job/housing balance. <u>(This mitigation measure is not applicable to the Landmark Village project. The measure refers to resident worker training programs for Business Park employees. The Landmark Village project does not propose a Business Park.)Not applicable.</u></p> <p>at. Implement home dispatching system where employees receive routing schedule by phone instead of driving to work. <u>(This mitigation measure is not applicable to the Landmark Village project. The measure refers to establishment of home dispatching system for Business Park employees. The Landmark Village project does not propose a Business Park.)Not applicable.</u></p> <p>au. Develop a program to minimize the use of fleet vehicles during smog alerts (for business not subject to Regulation XV (now Rule 2202) or XII). <u>(This mitigation measure is not applicable to the Landmark Village project. The measure refers to creation of a program designed to reduce use of vehicle fleets. The Landmark Village project does not propose a Business Park.)Not applicable.</u></p> <p>av. Use low-emissions fleet vehicles: - TLEV</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none"> - ULEV - LEV - ZEV <p><i>(This mitigation measure is not applicable to the Landmark Village project. The measure promotes use of alternative fuels in vehicle fleets. The Landmark Village project does not propose a Business Park.)Not applicable.</i></p> <p>aw. Require employers not subject to Regulation XV (now Rule 2202) to provide commuter information area. <i>(This mitigation measure is not applicable to the Landmark Village project. The measure requires employers in Business Parks to provide commuter information area. The Landmark Village project does not propose a Business Park.)Not applicable.</i></p> <p>ax. Reduce employee parking spaces for those businesses subject to Regulation XV (now Rule 2202). <i>(This mitigation measure is not applicable to the Landmark Village project. The measure requires employers in Business Parks to limit employee parking. The Landmark Village project does not propose a Business Park.)Not applicable.</i></p> <p>ay. Implement compressed workweek schedules where weekly work hours are compressed into fewer than five days.</p> <ul style="list-style-type: none"> - 9/80 - 4/40 - 3/36 <p><i>(This mitigation measure is not applicable to the Landmark Village project. The measure promotes use of flexible work schedules in Business Park uses. The Landmark Village project does not propose a Business Park.)Not applicable.</i></p> <p>az. Offer first right of refusal, low interest</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>loans, or other incentives to employees who purchase or rent local residences. <u>(This mitigation measure has been omitted because it is not applicable to the Landmark Village project. The measure promotes use of incentives to Business Park employees who choose to reside in a local residence. The Landmark Village project does not propose a Business Park.)</u>Not applicable.</p> <p>ba. Develop a trip reduction plan to achieve 1.5 AVR for businesses with less than 100 employees or multi-tenant worksites. <u>(This mitigation measure is not applicable to the Landmark Village project. The measure promotes use of a trip reduction plan for Business Park users. The Landmark Village project does not propose a Business Park.)</u>Not applicable.</p> <p>bb. Provide on-site child care and after-school facilities or contribute to off-site development within walking distance. <u>(This mitigation measure is not applicable to the Landmark Village project. The measure promotes on-site childcare in Business Park uses. The Landmark Village project does not propose a Business Park.)</u>Not applicable.</p> <p>bc. Provide on-site employee services such as cafeterias, banks, etc. <u>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to provide on-site employee amenities such as cafeterias or banks. The Landmark Village project does not propose a Business Park.)</u>Not applicable.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.9 AIR QUALITY (continued)		
	<p>SP 4.10-9 (continued)</p> <p>Business Park Uses</p> <p>bd. Establish a shuttle service from residential core areas to the worksite. <u>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to provide shuttle service to residential areas. The Landmark Village project does not propose a Business Park.)</u> Not applicable.</p> <p>be. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters) <u>(This mitigation measure is not applicable to the Landmark Village project. The measure requires bus stops in Business Park uses. The Landmark Village project does not propose a Business Park.)</u> Not applicable.</p> <p>bf. Implement a pricing structure for single-occupancy employee parking and/or provide discounts to ridesharers. <u>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to encourage ridesharing and discourage travel in single occupancy vehicles. The Landmark Village project does not propose a Business Park.)</u> Not applicable.</p> <p>bg. Utilize parking in excess of code requirements as on-site park-n-ride lots or contribute to construction of off-site lots. <u>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to provide parking in excess of code for park and ride lots. The Landmark Village project does</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>not propose a Business Park.) Not applicable.</p> <p>bh. Any two of the following:</p> <ul style="list-style-type: none"> - Construct off-site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on-site improvements, such as bicycle paths. - Include bicycle parking facilities, such as bicycle lockers and racks. - Include showers for bicycling employees' use. <p><u>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to construct on-site improvements that encourage bicycling. The Landmark Village project does not propose a Business Park.)</u></p> <p>Not applicable.</p> <p>bi. Any two of the following:</p> <ul style="list-style-type: none"> - Construct off-site pedestrian facility improvements, such as overpasses, wider sidewalks. - Construct on-site pedestrian facility improvements, such as building access that is physically separated from street and parking lot traffic and walk paths. - Include showers for pedestrian employees' use. <p><u>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to provide pedestrian facility improvements. The Landmark Village project does not propose a Business Park.)</u></p> <p>Not applicable.</p> <p>bj. Provide shuttles to major rail transit</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>stations and multi-modal centers. <u>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to provide shuttles to transit stations. The Landmark Village project does not propose a Business Park.)</u></p> <p>Not applicable.</p> <p>bk. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.). <u>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to contribute towards regional transit improvements. The Landmark Village project does not propose a Business Park.)</u></p> <p>Not applicable.</p> <p>bl. Synchronize traffic lights on streets impacted by development. <u>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to synchronize traffic signals affected by operation of the park. The Landmark Village project does not propose a Business Park.)</u>Not applicable.</p> <p>bm. Reschedule truck deliveries and pickups to off-peak hours. <u>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to schedule deliveries at off-peak hours. The Landmark Village project does not propose a Business Park.)</u>Not applicable.</p> <p>bn Implement a lunch shuttle service from a worksite(s) to food establishments. <u>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><i>implement a lunch shuttle service. The Landmark Village project does not propose a Business Park.)</i>Not applicable.</p> <p>bo. Require on-site truck loading zones. <i>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to provide on-site truck loading zones. The Landmark Village project does not propose a Business Park.)</i>Not applicable.</p> <p>bp. Install aerodynamic add-on devices to heavy-duty trucks. <i>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to install aerodynamic devices on truck fleets. The Landmark Village project does not propose a Business Park.)</i>Not applicable.</p> <p>bq. Implement or contribute to public outreach programs. <i>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to conduct public outreach programs to reduce VMT. The Landmark Village project does not propose a Business Park.)</i>Not applicable.</p> <p>Stationary Source Operational Emissions <i>Residential</i></p> <p>br. Use solar or low emission water heaters.</p> <p>bs. Use central water heating systems.</p> <p>bt. Use built-in energy-efficient appliances.</p> <p>bu. Provide shade trees to reduce building heating/cooling needs.</p> <p>bv. Use energy-efficient and automated controls for air conditioners.</p> <p>bw. Use double-paned windows.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none"> bx. Use energy-efficient low-sodium parking lot lights. by. Use lighting controls and energy-efficient lighting. 	
	<p>SP 4.10-9 (continued)</p> <p>Residential</p> <ul style="list-style-type: none"> bz. Use fuel cells in residential subdivisions to produce heat and electricity. <i>(This measure is not yet considered technically or economically feasible. There are presently no commercially available fuel cell applications for individual home use at a reasonable cost.)</i> ca. Orient buildings to the north for natural cooling and include passive solar design (e.g., daylighting). cb. Use light-colored roofing materials to reflect heat. cc. Increase walls and attic insulation beyond Title 24 requirements. cd. Use solar or low emission water heaters. ce. Use central water heating systems. cf. Provide shade trees to reduce building heating/cooling needs. cg. Use energy-efficient and automated controls for air conditioners. ch. Use double-paned windows. ci. Use energy-efficient low-sodium parking lot lights. cj. Use lighting controls and energy-efficient lighting. ck. Use light-colored roofing materials to reflect heat. cl. Increase walls and attic insulation beyond Title 24 requirements. cm. Orient buildings to the north for natural cooling and include passive solar design 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	(e.g., daylighting).	
	<p>SP 4.10-9 (continued)</p> <p>Stationary Source Operational Emissions (continued)</p> <p><i>Business Park Uses</i></p> <p>cn. Provide shade trees to reduce building heating/cooling needs. <u>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to provide shade trees near structures. The Landmark Village project does not propose a Business Park.)</u></p> <p>Not applicable.</p> <p>co. Use energy-efficient and automated controls for air conditioning. <u>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to use energy efficient air conditioning. The Landmark Village project does not propose a Business Park.)</u></p> <p>Not applicable.</p> <p>cp. Use double-paned windows. <u>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to use energy efficient windows. The Landmark Village project does not propose a Business Park.)</u></p> <p>Not applicable.</p> <p>cq. Use energy-efficient low-sodium parking lot lights. <u>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to use energy efficient parking lot lighting. The</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>Landmark Village project does not propose a Business Park.)</u>Not applicable.</p> <p>cr. Use lighting controls and energy-efficient lighting. <u>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to use energy efficient lighting. The Landmark Village project does not propose a Business Park.)</u>Not applicable.</p> <p>cs. Use light-colored roofing materials to reflect heat. <u>(This mitigation is not applicable to the Landmark Village project. The measure requires uses within the Business Park to use light color roofing materials. The Landmark Village project does not propose a Business Park.)</u>Not applicable.</p> <p>ct. <u>Orient buildings to the north for natural cooling and include passive solar design (e.g., daylighting). (This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to orient the structure to account for passive solar design. The Landmark Village project does not propose a Business Park.)</u> Not applicable.</p> <p>cu. Increase walls and attic insulation beyond Title 24 requirements. <u>(This mitigation measure has been omitted because it is not applicable to the Landmark Village project. The measure requires uses within the Business Park to increase wall insulation beyond code requirements. The Landmark Village project does not propose a Business Park.)</u>Not applicable.</p> <p>cv. Improved storage and handling or source materials. <u>(This mitigation measure has been</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>omitted because it is not applicable to the Landmark Village project. The measure requires uses within the Business Park to improve storage and handling. The Landmark Village project does not propose a Business Park.)</u> Not applicable.</p> <p>cw. <u>Materials substitution (e.g., use water-based paints, life-cycle analysis). (This mitigation measure has been omitted because it is not applicable to the Landmark Village project. The measure requires uses within the Business Park to conduct materials substitution in their processes. The Landmark Village project does not propose a Business Park.)</u> Not applicable.</p> <p>cx. <u>Modify manufacturing processes (e.g., reduce process stages, closed-loop systems, materials recycling). (This mitigation measure has been omitted because it is not applicable to the Landmark Village project. The measure addresses manufacturing uses within a Business Park. The Landmark Village project does not propose a Business Park.)</u> Not applicable.</p> <p>cy. <u>Resource recovery systems that redirect chemicals to new production processes. (This mitigation measure has been omitted because it is not applicable to the Landmark Village project. The measure addresses manufacturing uses within a Business Park. The Landmark Village project does not propose a Business Park.)</u> Not applicable.</p> <p>SP 4.10-10 All non-residential development of 25,000 gross square feet or more shall comply with the County’s Transportation Demand Management (TDM) Ordinance (Ordinance No. 93-0028M) in</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>effect at the time of subdivision. The sizes and configurations of the Specific Plan's non-residential uses are not known at this time and the Ordinance specifies different requirements based on the size of the project under review. All current provisions of the ordinance are summarized in Appendix 4.10.</p> <p>SP 4.10-11 Subdivisions and buildings shall comply with Title 24 of the California Code of Regulations which are current at the time of development.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.9 AIR QUALITY (continued)		
	<p>SP 4.10-12 Lighting for public streets, parking areas, and recreation areas shall utilize energy efficient light and mechanical, computerized or photo cell switching devices to reduce unnecessary energy usage.</p> <p>SP 4.10-13 Any on-site subterranean parking structures shall provide adequate ventilation systems to disperse pollutants and preclude the potential for a pollutant concentration to occur. <u>(This mitigation measure it is not applicable to the Landmark Village project. The measure addresses ventilation of subterranean parking garages. The Landmark Village project does not propose such parking facilities.)</u>Not applicable.</p> <p>SP 4.10-14 The sellers of new residential units shall be required to distribute brochures and other relevant information published by the SCAQMD or similar organization to new homeowners regarding the importance of reducing vehicle miles traveled and related air quality impacts, as well as on local opportunities for public transit and ridesharing.</p> <p>LV 4.9-1 Maintain construction equipment and vehicle engines in good condition and in proper tune as per manufacturers' specifications and per SCAQMD rules, to minimize exhaust emissions.</p> <p>LV 4.9-2 All on-road and off-road construction equipment shall use aqueous fuel, to the extent feasible, as determined by the County of Los Angeles. Aqueous fuel is a stable emulsion of up to 55 percent water and petroleum-based naphtha (a petroleum product from the earliest stages of the refinery process), with trace amounts of bonding and winterizing agents. It can be used to run both gasoline and diesel engines.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>Aqueous fuel is clean-burning and, based on information provided in the URBEMIS2002 model for its use in construction equipment, it can reduce NO_x emissions by <u>154</u> percent and PM₁₀, <u>including</u> PM_{2.5}, emissions by <u>63–50</u> percent.</p>	
	<p>LV 4.9-3 All on-road and off-road construction equipment shall employ cooled exhaust gas recirculation technology, to the extent feasible, as determined by the County of Los Angeles. Cooled exhaust gas recirculation (EGR) reduces CO, VOC, NO_x, and PM₁₀ <u>including</u> PM_{2.5}, emissions as follows: Oxygen is required for fuel to be consumed in a combustion engine. The high temperatures found within combustion engines cause nitrogen in the surrounding air to react with any unused oxygen from the combustion process to form NO_x. EGR technology directs some of the exhaust gases that have already been used by the engine and no longer contain much oxygen back into the intake of the engine. By mixing the exhaust gases with fresh air, the amount of oxygen entering the engine is reduced. Since there is less oxygen to react with, fewer nitrogen oxides are formed and the amount of nitrogen oxides that a vehicle releases into the atmosphere is decreased. <u>The URBEMIS2007 model does not estimate emissions reductions from EGR. Based on information provided in the URBEMIS2002 model for its use in construction equipment, cooled exhaust gas recirculation technology can reduce CO and VOC emissions by 90 percent, NO_x emissions by 40 percent and PM₁₀ emissions by 85 percent.</u></p> <p>LV 4.9-4 All on-road and off-road construction equipment shall employ diesel particulate</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>filters₇₂. Diesel particulate filters which can reduce PM₁₀ emissions from construction equipment by as much as 850 percent based on information provided in the URBEMIS20072 model.</p> <p><u>LV 4.9-4a On-road construction trucks shall be routed away from sensitive receptor areas.</u></p> <p><u>LV 4.9-4b Require all on-site construction equipment to meet EPA Tier 2 or higher emissions standards according to the following schedule:</u></p> <ul style="list-style-type: none"> • <u>April 1, 2010, to December 31, 2011: All offroad diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 2 offroad emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 2 or Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.</u> • <u>January 1, 2012, to December 31, 2014: All offroad diesel-powered construction equipment greater than 50 hp shall meet Tier 3 offroad emissions standards. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.</u> 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none"> • <u>Post-January 1, 2015: All offroad diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.</u> • <u>A copy of each unit's certified tier specification, BACT documentation, and CARB or AQMD operating permit shall be provided at the time of mobilization of each applicable unit of equipment.</u> 	
	<p>LV 4.9-5 <u>(Replaces Mitigation Measure Specific Plan 4.10-6) The applicant shall implement all rules and regulations adopted by the Governing Board of the SCAQMD which are applicable to the development of the subdivision (such as Rule 402 – Nuisance, Rule 403 – Fugitive Dust, Rule 1113 – Architectural Coatings) and which are in effect at the time of development. The purpose of Rule 403 is to reduce the amount of particulate matter entrained in the ambient air as a result of man-made fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or man-made condition capable of generating fugitive dust such as the mass and remedial grading associated with the project as well as weed abatement and stockpiling of construction materials (i.e., rock, earth, gravel). Rule 403 requires that grading operations either (1) take actions specified in</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>Tables 1 and 2 of the Rule for each applicable <u>source of fugitive dust and take certain notification and record keeping actions, or (2) obtain an approved Fugitive Dust Control Plan. A complete copy of the SCAQMD's Rule 403 Implementation Handbook, which has been included in Recirculated Draft EIR Appendix 4.10, provides guideline tables to demonstrate the typical mitigation program and record keeping required for grading operations (Tables 1 and 2 and sample record-keeping chart). The record keeping is accomplished by on-site construction personnel, typically the construction superintendent.</u></p> <p><u>The project applicant or its designee shall implement the following:</u></p> <p><u>Grading</u></p> <ul style="list-style-type: none"> <u>a. Apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for 10 days or more).</u> <u>b. Replace groundcover in disturbed areas as quickly as possible.</u> <u>c. Enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications, to exposed piles (i.e., gravel, sand, dirt) with 5 percent or greater silt content.</u> <u>d. Water active sites at least twice daily.</u> <u>e. Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour.</u> <u>f. Monitor for particulate emissions according to district-specified procedures.</u> <u>g. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should</u> 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>maintain at least 2 feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer) in accordance with the requirements of CVC Section 23114.</u></p> <p><u>Paved Roads</u></p> <p><u>h. Sweep paved streets at the end of the day if visible soil material is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water).</u></p> <p><u>i. Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.</u></p> <p><u>Unpaved Roads</u></p> <p><u>j. Apply water three times daily, or non-toxic soil stabilizers according to manufacturers' specifications, to all unpaved parking or staging areas or unpaved road surfaces.</u></p> <p><u>k. Reduce traffic speeds on all unpaved roads to 15 miles per hour or less.</u></p> <p><u>l. Pave construction roads that have a traffic volume of more than 50 daily trips by construction equipment, 150 total daily trips for all vehicles.</u></p> <p><u>m. Pave all construction access roads at least 100 feet on to the site from the main road.</u></p> <p><u>n. Pave construction roads that have a daily traffic volume of less than 50 vehicular trips.</u></p> <p>Any dry cleaners proposing to locate on site shall utilize the services of off site cleaning operations at already SCAQMD permitted locations. No on site dry cleaning operations shall be permitted within Landmark Village.</p> <p>LV 4.9-6 <u>(Replaces Mitigation Measure SP 4.10-7) Prior</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>to the approval of each future subdivision proposed in association with Landmark Village, each of the construction emission reduction measures indicated below, which are based on Tables 11-2 and 11-3 of the SCAQMD's CEQA Air Quality Handbook, shall be implemented:</p> <p><u>On-Road Mobile Source Construction Emissions</u></p> <ul style="list-style-type: none"> a. <u>Configure construction parking to minimize traffic interference.</u> b. <u>Provide temporary traffic controls when construction activities have the potential to disrupt traffic to maintain traffic flow (e.g., signage, flag person, detours).</u> c. <u>Schedule construction activities that affect traffic flow to off-peak hours (e.g., between 7:00 PM and 6:00 AM and between 10:00 AM and 3:00 PM).</u> d. <u>Develop a trip reduction plan to achieve a 1.5 average vehicle ridership (AVR) for construction employees.</u> e. <u>Implement a shuttle service to and from retail services and food establishments during lunch hours.</u> f. <u>Develop a construction traffic management plan that includes the following measures to address construction traffic that has the potential to affect traffic on public streets:</u> <ul style="list-style-type: none"> - <u>Rerouting construction traffic off congested streets;</u> - <u>Consolidating truck deliveries; and</u> - <u>Providing temporary dedicated turn lanes for movement of construction trucks and equipment on and off of the site.</u> g. <u>Prohibit truck idling in excess of two minutes.</u> <p><u>Off-Road Mobile Source Construction</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>Emissions</u></p> <p><u>h. Use pile drivers powered by an alternative to diesel fuel.</u></p> <p><u>i. Suspend use of all construction equipment operations during second stage smog alerts.</u></p> <p><u>j. Prevent trucks from idling longer than two minutes.</u></p> <p><u>k. Use electricity from power poles rather than temporary diesel-powered generators.</u></p> <p><u>l. Use electricity from power poles rather than temporary gasoline-powered generators.</u></p> <p><u>m. Use mobile equipment powered by an alternative to diesel fuel.</u></p> <p><u>n. Use on-site mobile equipment powered by an alternative to gasoline.</u></p> <p>The project developer(s) shall coordinate with Santa Clarita Transit to identify appropriate bus stop/turnout locations.</p> <p>LV 4.9-7 Any dry cleaners proposing to locate on site shall utilize the services of off-site cleaning operations at already SCAQMD-permitted locations. No on-site dry cleaning operations shall be permitted within Landmark Village. Kiosks containing transit information shall be constructed by the project applicant adjacent to selected future bus stops prior to initiation of bus service to the site.</p> <p>LV 4.9-8 <u>(Replaces Mitigation Measure SP 4.10-9) Prior to the approval of each future subdivision proposed in association with Landmark Village, each of the operational emission reduction measures indicated below, which are based on Tables 11-6 and 11-7 of the SCAQMD's CEQA</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>Air Quality Handbook</u>, shall be implemented.</p> <p><u>On Road Mobile Source Operational Emissions</u></p> <p><u>Residential Uses</u></p> <ul style="list-style-type: none"> a. <u>Provide residents with information regarding the availability of existing shuttle service providers and public transit.</u> b. <u>Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters).</u> c. <u>Construct off-site pedestrian facility improvements, such as overpasses and wider sidewalks.</u> d. <u>Include retail services within or adjacent to residential subdivisions.</u> e. <u>Provide residents with information regarding the availability of existing shuttle service providers and public transit.</u> f. <u>Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.).</u> g. <u>Synchronize traffic lights on streets impacted by development.</u> h. <u>Construct, contribute, or dedicate land for the provision of off-site bicycle trails linking the facility to designated bicycle commuting routes.</u> <p><u>Commercial Uses</u></p> <ul style="list-style-type: none"> i. <u>Provide preferential parking spaces for carpools and vanpools and provide 7 foot 2 inch minimum vertical clearance in parking facilities for vanpool access.</u> j. <u>Implement on-site circulation plans in parking lots to reduce vehicle queuing.</u> k. <u>Improve traffic flow at drive-throughs by</u> 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>designing separate windows for different functions and by providing temporary parking for orders not immediately available for pickup.</u></p> <p><u>l. Set up resident worker training programs to improve job/housing balance.</u></p> <p><u>m. Require retail facilities or special event centers to offer travel incentives such as discounts on purchases for transit riders.</u></p> <p><u>n. Establish a shuttle service from residential core areas to the commercial core areas.</u></p> <p><u>o. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters).</u></p> <p><u>p. Implement a pricing structure for single-occupancy employee parking and/or provide discounts to ridesharers.</u></p> <p><u>q. Include residential units within a commercial project.</u></p> <p><u>r. Utilize parking in excess of code requirements as on-site park-n-ride lots or contribute to construction of off-site lots.</u></p> <p><u>s. Any two of the following:</u></p> <ul style="list-style-type: none"> <u>- Construct off-site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on-site improvements, such as bicycle paths.</u> <u>- Include bicycle parking facilities, such as bicycle lockers and racks.</u> <u>- Include showers for bicycling employees' use.</u> <p><u>t. Any two of the following:</u></p> <ul style="list-style-type: none"> <u>- Construct off-site pedestrian facility improvements, such as overpasses, wider</u> 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>sidewalks.</u></p> <ul style="list-style-type: none"> - <u>Construct on-site pedestrian facility improvements, such as building access that is physically separated from street and parking lot traffic and walk paths.</u> - <u>Include showers for pedestrian employees' use.</u> u. <u>Provide shuttles from the commercial core areas to major transit stations.</u> v. <u>Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.).</u> w. <u>Charge visitors to park at specialty commercial/entertainment developments.</u> x. <u>Synchronize traffic lights on streets impacted by development.</u> y. <u>Reschedule truck deliveries and pickups to off-peak hours.</u> z. <u>Set up paid parking systems where drivers pay at walkup kiosk and exit via a stamped ticket to reduce emissions from queuing vehicles.</u> aa. <u>Require on-site truck loading zones.</u> ab. <u>Implement or contribute to public outreach programs.</u> ac. <u>Require employers not subject to Regulation XV (now Rule 2202) to provide commuter information area.</u> <p><u>Stationary Source Operational Emissions</u></p> <p><u>Residential</u></p> <ul style="list-style-type: none"> ad. <u>Use solar or low emission water heaters.</u> ae. <u>Use central water heating systems.</u> af. <u>Use built-in energy-efficient appliances.</u> ag. <u>Provide shade trees to reduce building heating/cooling needs.</u> 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>ah. <u>Use energy-efficient and automated controls for air conditioners.</u></p> <p>ai. <u>Use double-paned windows.</u></p> <p>aj. <u>Use energy-efficient low-sodium parking lot lights.</u></p> <p>ak. <u>Use lighting controls and energy-efficient lighting.</u></p> <p>al. <u>Orient buildings to the north for natural cooling and include passive solar design (e.g., daylighting).</u></p> <p>am. <u>Use light-colored roofing materials to reflect heat.</u></p> <p>an. <u>Increase walls and attic insulation beyond Title 24 requirements.</u></p> <p><u>Commercial Uses</u></p> <p>ao. <u>Use solar or low emission water heaters.</u></p> <p>ap. <u>Use central water heating systems.</u></p> <p>aq. <u>Provide shade trees to reduce building heating/cooling needs.</u></p> <p>ar. <u>Use energy-efficient and automated controls for air conditioners.</u></p> <p>as. <u>Use double-paned windows.</u></p> <p>at. <u>Use energy-efficient low-sodium parking lot lights.</u></p> <p>au. <u>Use lighting controls and energy-efficient lighting.</u></p> <p>av. <u>Use light-colored roofing materials to reflect heat.</u></p> <p>aw. <u>Increase walls and attic insulation beyond Title 24 requirements.</u></p> <p>ax. <u>Orient buildings to the north for natural cooling and include passive solar design (e.g., daylighting).</u></p> <p>LV4.9-9 <u>The project developer(s) shall coordinate with</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>Santa Clarita Transit to identify appropriate bus stop/turnout locations.</u></p> <p><u>LV4.9-10 Kiosks containing transit information shall be constructed by the project applicant adjacent to selected future bus stops prior to initiation of bus service to the site.</u></p> <p><u>LV4.9-11</u> Wood-burning fireplaces and stoves shall be prohibited in all residential units. Use of wood in fireplaces shall be prohibited through project Covenants, Codes & Restrictions (CC&Rs).</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.10 WATER SERVICE		
<p><u>Since the release of the Landmark Village Recirculated Draft EIR, portions of Section 4.10, Water Service have been updated, as reflected below in double-underline and strikeout text. The reader should also note that two important documents used in preparation of this section of the EIR have been updated. In June 2011, the Castaic Lake Water Agency (CLWA) and the retail water purveyors adopted the 2010 Urban Water Management Plan (2010 UWMP). The retail water purveyors prepared and released the 2010 Santa Clarita Valley Water Report (2010 Water Report), also in June 2011.</u></p> <p><u>Information presented in the 2010 UWMP and 2010 Water Report supports the conclusion in the Landmark Village Recirculated Draft EIR that an adequate and sustainable supply of local and imported water is available to meet all future water supply needs of the Santa Clarita Valley, including the Landmark Village project, without creating significant environmental impacts. The 2010 UWMP and 2010 Water Report are presented in the Landmark Village Final EIR, Appendix F4.10. Summaries of both the 2010 UWMP and the 2010 Water Report are presented in the Final EIR in New Topical Response 15: 2010 Urban Water Management Plan and New Topical Response 16: 2010 Santa Clarita Valley Water Report.</u></p> <p><u>In addition, also since the release of the Recirculated Draft EIR, August 2010 ammonium perchlorate was detected in Valencia Water Company (VWC) Well 201. A summary of the pertinent events surrounding this topic is presented in the Final EIR in Updated Topical Response 1: Perchlorate Treatment Update. That topical response also addresses the perchlorate-related comments received on the Landmark Village Recirculated Draft EIR, and provides an update on the progress made to date in implementing the remediation and treatment of perchlorate in the Santa Clarita Valley's groundwater supplies.</u></p>	<p>SP 4.11-1 The proposed Specific Plan shall implement a water reclamation system in order to reduce the Specific Plan's demand for imported potable water. The Specific Plan shall install a distribution system to deliver non-potable reclaimed water to irrigate land uses suitable to accept reclaimed water, pursuant to Los Angeles County Department of Health Standards. <i>(Consistent with this measure, the Project Description section of this EIR discusses the fact that the Landmark Village project will install and implement a recycled water delivery system in order to reduce the project's demand for imported potable water. As required by this measure, recycled (reclaimed) water would be used to irrigate land uses suitable to accept recycled water, pursuant to Los Angeles County Department of Health standards.)</i></p> <p>SP 4.11-2 Landscape concept plans shall include a palette rich in drought-tolerant and native plants. <i>(Consistent with this measure, the Landmark Village project's landscape plans shall include a palette rich in drought-tolerant and native plants.)</i></p> <p>SP 4.11-3 Major manufactured slopes shall be landscaped with materials that will eventually naturalize, requiring minimal irrigation. <i>(Consistent with this measure, the Landmark Village project's grading/landscape plans shall include a note requiring landscaping with materials that will eventually naturalize, requiring minimal irrigation.)</i></p>	<p>With implementation of the identified mitigation measures, the proposed project's water resources impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p>

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<p>The proposed Landmark Village project would generate a total water demand of 972 acre-feet per year (afy),⁸ 608 afy of potable water demand, and 364 afy of non-potable demand. Potable water demand (608 afy) would be met by the Valencia Water Company through the use of the project applicant's rights to 7,038 afy of groundwater from the Alluvial aquifer, which is presently used by the applicant for agricultural irrigation. Because this water is already used to support the applicant's existing agricultural uses, there is not expected to be any significant environmental effects resulting from the use of such water to meet the potable demands of the Landmark Village project, which is part of the approved Newhall Ranch Specific Plan area. In addition, due to project conditions, the amount of groundwater that will be used to meet the potable demands of the Newhall Ranch Specific Plan, including the Landmark Village project, cannot exceed the amount of water historically and presently used by the applicant for agricultural uses. Therefore, no net increase in groundwater use will occur with implementation of this project pursuant to the Specific Plan.</p> <p>Non-potable water demand (364 afy) would be met through the use of recycled (reclaimed) water from the initial phase of the Newhall Ranch Water Reclamation Plant (WRP), with build-out of the WRP occurring over time as demand for treatment increases with implementation of the Newhall Ranch Specific Plan. Alternatively, if the Newhall Ranch WRP is not operating at the time of project occupancy, the non-potable water demand would be met through the use of recycled water from the existing Valencia WRP, located upstream of the Landmark Village project site.</p>		

⁸ An acre-foot represents 43,560 cubic feet, or 325,850 gallons, of water. An acre-foot of water has been generally defined as "an irrigation-based measurement equaling the quantity of water required to cover an acre of land to a depth of one foot." See, *Brydon v. East Bay Mun. Utility Dist.* (1994) 24 Cal.App.4th 178, 182, fn. 1.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.10 WATER SERVICE (continued)		
<p>Accordingly, the proposed project's water demand would be met by relying on two primary sources of water supply, namely, the applicant's agricultural water supplies and recycled water supplied by the Newhall Ranch WRP or the existing Valencia WRP. Because these two independent water sources meet the water needs of the proposed project, no potable water would be needed from the existing or planned water supplies of Castaic Lake Water Agency (CLWA), including imported water from CLWA's State Water Project (SWP) supplies. Nonetheless, CLWA's water supplies, including imported water from the SWP, and other non-SWP <u>imported</u> supplies, are assessed in this EIR for information purposes.</p> <p>Based on the information presented, an adequate supply of water is available to serve the Landmark Village project, and the project will not contribute to any significant cumulative water supply impacts in the Santa Clarita Valley, because it would rely on local groundwater and recycled water from local water reclamation plants and not use or rely on CLWA's SWP supplies. No significant water supply or water quality impacts are expected from supplying available water to meet the demands of the Landmark Village project. No significant cumulative water supply impacts are expected to result from supplying water to the Landmark Village project, because it would not use or rely on CLWA's SWP supplies.</p>	<p>SP 4.11-4 Water conservation measures as required by the State of California shall be incorporated into all irrigation systems. <i>(Consistent with this measure, the Landmark Village project shall incorporate into all of its irrigation systems, water conservation measures required by the State of California.)</i></p> <p>SP 4.11-5 <u>The area within each future subdivision within Newhall Ranch shall be annexed to the Valencia Water Company prior to issuance of building permits. (This measure is not applicable to the Landmark Village project, because the project site is already located within the Valencia Water Company's service area.)</u> Not applicable.</p> <p>SP 4.11-6 In conjunction with the submittal of applications for tentative tract maps or parcel maps which permit construction, and prior to approval of any such tentative maps, and in accordance with the requirements of the Los Angeles County General Plan Development Monitoring System (DMS), as amended, Los Angeles County shall require the applicant of the map to obtain written confirmation from the retail water agency identifying the source(s) of water available to serve the map concurrent with need. If the applicant of such map cannot obtain confirmation that a water source(s) is available for buildout of the map, the map shall be phased with the timing of an available water source(s), consistent with the County's DMS requirements. <i>(Consistent with this measure, Valencia Water Company, the retail water purveyor for the Landmark Village project, has issued its SB Revised Landmark WSA for the project <u>610 water supply assessment for the project</u>, confirming the availability of water to serve the project concurrent with need.)</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.10 WATER SERVICE (continued)		
	<p>SP 4.11-7 Prior to commencement of use, all uses of recycled water shall be reviewed and approved by the State of California Health and Welfare Agency, Department of Health Services. <i>(Consistent with this measure, the Landmark Village project's recycled water delivery system shall be reviewed and approved by the State of California Health and Welfare Agency, Department of Health Services.)</i></p> <p>SP 4.11-8 Prior to the issuance of building permits that allow construction, the applicant of the subdivision shall finance the expansion costs of water service extension to the subdivision through the payment of connection fees to the appropriate water agency(ies). <i>(Consistent with this measure, prior to issuance of building permits, the applicant for the Landmark Village project shall finance the required water service extension/expansion costs to the Landmark Village subdivision through the payment of connection fees to the appropriate water agency or agencies. <u>pay for and construct the required water service extension to the Landmark Village subdivision.</u>)</i></p> <p>SP 4.11-9 Pursuant to Public Resources Code §21081(a)(2), the County shall recommend that the Upper Santa Clara Water Committee (or Santa Clarita Valley Water Purveyors), made up of the Castaic Lake Water Agency, Los Angeles County Waterworks District No. 36, Newhall County Water District, Santa Clarita Water Division of Castaic Lake Water Agency (CLWA) and the Valencia Water Company, prepare an annual water report that will discuss the status of groundwater within the Alluvial and Saugus Aquifers, and State Water Project water supplies as they relate to the Santa Clarita Valley. The report will also include an</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>SP 4.11-9 (continued) annual update of the actions taken by CLWA to enhance the quality and reliability of existing and planned water supplies for the Santa Clarita Valley. In those years when the Committee or purveyors do not prepare such a report, the applicant at its expense shall cause the preparation of such a report that is acceptable to the County to address these issues. This annual report shall be provided to Los Angeles County who will consider the report as part of its local land use decision-making process. <i>(To date, four such water reports have been prepared (1998, 1999, 2000 and 2001) and provided to both the County of Los Angeles and the City of Santa Clarita.) (As an update, a total of seven10 annual water reports have been prepared and provided to the County of Los Angeles, the City of Santa Clarita and other interested persons and organizations from 1998 through 2004.</i> The latest 2004-2009 Santa Clarita Valley Water Report is included in <u>Recirculated Draft EIR Appendix 4.10 of this EIR.</u></p> <p>SP 4.11-10 Pursuant to Public Resources Code §21081(a)(2), the County shall recommend that CLWA, in cooperation with other Santa Clarita Valley retail water providers, continue to update the Urban Water Management Plan (UWMP) for Santa Clarita Valley once every five years (on or before December 31) to ensure that the County receives up-to-date information about the existing and planned water supplies in the Santa Clarita Valley. The County will consider the information contained in the updated UWMP in connection with the County’s future local land use decision-making</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.10 WATER SERVICE (continued)		
	<p>SP 4.11-10 (continued) process. The County will also consider the information contained in the updated UWMP in connection with the County's future consideration of any Newhall Ranch tentative subdivision maps allowing construction. (CLWA and other local retail water purveyors are expected to have completed the 2005 Urban Water Management Plan (2005-UWMP) for the CLWA service area in the fall 2005. The County will consider the information contained in the adopted 2005 UWMP in connection with the Landmark Village project.) (This mitigation will be also applicable to subsequent updates to the UWMP).</p> <p>SP 4.11-11 <u>With implementation of the proposed Saugus ASR program, ASR wells shall be spaced so that adjacent non-project wells will not lose pumping capacity as a result of drawdown occurring during pumping of the ASR wells. (This measure is not applicable to the Landmark Village project, because the Saugus ASR program is not needed to satisfy the water demands of the Santa Clarita Valley.)</u> Not applicable.</p> <p>SP 4.11-12 <u>With implementation of the proposed Saugus ASR program, the ultimate number of ASR wells to be constructed shall be sufficient to inject the ultimate target injection volume of 4,500 afy and withdraw the ultimate target withdraw volume of 4,100 afy. (This measure is not applicable to the Landmark Village project, because the Saugus ASR program is not needed to satisfy the water demands of the Santa Clarita Valley.)</u> Not applicable.</p> <p>SP 4.11-13 <u>With implementation of the proposed Saugus ASR program, ASR wells shall be constructed</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>in the following two general areas:</u></p> <p>(a) <u>South of the Santa Clara River and west of Interstate 5. This location includes areas within the Newhall Ranch Specific Plan boundary. (This area is referred to as the “south ASR well field.”); and</u></p> <p>(b) <u>North of the Santa Clara River and west of Castaic Creek. (This location is referred to as the “north ASR well field.”)</u></p> <p><u>(This measure is not applicable to the Landmark Village project, because the Saugus ASR program is not needed to satisfy the water demands of the Santa Clarita Valley.)</u>Not applicable.</p> <p>SP 4.11-14 <u>The Saugus Groundwater Banking/ASR program injection water must meet the water quality requirements of the State Regional Water Quality Control Board, Los Angeles Region. The water extracted for use on the Specific Plan site shall meet the Title 22 drinking water standards of the State Department of Health Services. (This measure is not applicable to the Landmark Village project, because the Saugus ASR program is not needed to satisfy the water demands of the Santa Clarita Valley.)</u>Not applicable.</p> <p>SP 4.11-15 Groundwater historically and presently used for crop irrigation on the Newhall Ranch Specific Plan site and elsewhere in Los Angeles County shall be made available by the Newhall Land and Farming Company, or its assignee, to partially meet the potable water demands of the Newhall Ranch Specific Plan. The amount of groundwater pumped for this purpose shall not exceed 7,038 AFY. This is the amount of groundwater pumped historically and presently by the Newhall Land and Farming Company in Los Angeles County to support its agricultural operations. Pumping this amount</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	will not result in a net increase in groundwater	
	<p>SP 4.11-15 (continued)</p> <p>use in the Santa Clarita Valley. To monitor groundwater use, the Newhall Land and Farming Company, or its assignee, shall provide the County an annual report indicating the amount of groundwater used in Los Angeles County and the specific land upon which that groundwater was historically used for irrigation. For agricultural land located off the Newhall Ranch Specific Plan site in Los Angeles County, at the time agricultural groundwater is transferred from agricultural uses on that land to Specific Plan uses, The Newhall Land and Farming Company, or its assignee, shall provide a verified statement to the County’s Department of Regional Planning that Alluvial aquifer water rights on that land will now be used to meet Specific Plan demand. <i>(Consistent with this measure, the applicant will provide the County with the required annual reports, and the reports are included in the Recirculated Draft EIR Appendix 4.10.)</i>-</p> <p>SP 4.11-16 The agricultural groundwater used to meet the needs of the Specific Plan shall meet the drinking water quality standards required under Title 22 prior to use. (Consistent with this measure, the agricultural groundwater used to meet the needs of the Landmark Village project shall meet the drinking water quality standards required under Title 22 prior to use.)</p>	
	<p>SP 4.11-17 In conjunction with each project-specific subdivision map for the Newhall Ranch Specific Plan, the County shall require the applicant of that map to cause to be prepared a supplemental or subsequent Environmental Impact Report, as appropriate, pursuant to CEQA requirements. By imposing this EIR</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>requirement on each Newhall Ranch tentative subdivision map application allowing construction, the County will ensure that, among other things, the water needed for each proposed subdivision is confirmed as part of the County's subdivision map application process. This mitigation requirement shall be read and applied in combination with the requirements set forth in revised Mitigation Measure 4.11-6, above, and in Senate Bills 221 and 610, as applicable, regardless of the number of lots in a subdivision map. <i>(This measure has been satisfied by the County requiring preparation of this EIR for the Landmark Village project.)</i></p> <p>SP 4.11-18 <u>The storage capacity purchased in the Semitropic Groundwater Banking Project by the Newhall Ranch Specific Plan applicant shall be used in conjunction with the provision of water to the Newhall Ranch Specific Plan. The applicant, or entity responsible for storing Newhall Ranch water in this groundwater bank, shall prepare an annual status report indicating the amount of water placed in storage in the groundwater bank. This report shall be made available annually and used by Los Angeles County in its decision-making processes relating to buildout of the Newhall Ranch Specific Plan. (This measure is not applicable to the Landmark Village project, because the water to be stored in the Semitropic Groundwater Banking Project is not needed to satisfy the water demand of the project or cumulative development in the Santa Clarita Valley.)</u>Not applicable.</p> <p>SP 4.11-19 A Memorandum of Understanding (MOU) and Water Resource Monitoring Program have been entered into between United Water Conservation District and the Upper Basin</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>Water Purveyors, effective August 20, 2001. The MOU/Water Resource Monitoring Program, when executed, will put in place a joint water resource monitoring program that will be an effective regional water management tool for both the Upper and Lower Santa Clara River areas as further information is developed, consistent with the MOU. This monitoring</p>	
	<p>SP 4.11-19 (continued)</p> <p>program will result in a database addressing water usage in the Saugus and Alluvium aquifers over various representative water cycles. The parties to the MOU intend to utilize this database to further identify surface water and groundwater impacts on the Santa Clara River Valley. The applicant, or its designee, shall cooperate in good faith with the continuing efforts to implement the MOU and Water Resource Monitoring Program.</p> <p>As part of the MOU process, the United Water Conservation District and the applicant have also entered into a "Settlement and Mutual Release" agreement, which is intended to continue to develop data as part of an on-going process for providing information about surface and groundwater resources in the Santa Clara River Valley. In that agreement, the County and the applicant have agreed to the following:</p> <p><i>"4.3 Los Angeles County and Newhall will each in good faith cooperate with the parties to the MOU and will assist them as requested in the development of the database calibrating water usage in the Saugus and Alluvium aquifers over multi-year water cycles. Such cooperation will include, but not be limited to, providing the parties to the MOU with historical well data and other data concerning surface water and</i></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><i>groundwater in the Santa Clara River and, in the case of Newhall, providing Valencia Water Company with access to wells for the collection of well data for the MOU.</i></p>	
	<p>SP 4.11-19 (continued)</p> <p><i>4.4 Los Angeles County and Newhall further agree that the County of Los Angeles will be provided with, and consider, the then-existing data produced by the MOU's monitoring program in connection with, and prior to, all future Newhall Ranch subdivision approvals or any other future land use entitlements implementing the Newhall Ranch Specific Plan. If the then-existing data produced by the MOU's monitoring program identifies significant impacts to surface water or groundwater resources in the Santa Clara River Valley, Los Angeles County will identify those impacts and adopt feasible mitigation measures in accordance with the California Environmental Quality Act."</i></p> <p><i>(Since the MOU was signed in 2001, the United Water Conservation District and the Upper Basin Water Purveyors [CLWA, Los Angeles County Waterworks District #36, CLWA Santa Clarita Water Division, NCWD and Valencia Water Company] have worked together to accomplish the stated purpose and objectives of the MOU. The MOU has resulted in the collection and analysis of groundwater and other hydrologic data, along with construction and calibration of a sophisticated regional groundwater flow model for the Upper Basin. These efforts benefit the service areas of both the United Water Conservation District and the Upper Basin water purveyors.)</i></p> <p>SP 4.11-20 <u>The Specific Plan applicant, or its successors, shall assign its acquired Nickel Water rights to the Valencia Water Company or CLWA, and, in</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>consultation with the Valencia Water Company, CLWA or their designee(s), the applicant shall ensure that the Nickel Water is delivered to the appropriate place of use necessary to serve the Newhall Ranch Specific Plan at the time of need, as determined by the County of Los Angeles through required SB221 and/or SB610 analyses for future subdivision map applications. Upon approval of the Specific Plan, the applicant, Valencia Water Company, CLWA or a designee, will take delivery of the Nickel Water, so that such water will be used, or stored for use, for the Specific Plan in future years.</u></p> <p><u>To ensure that an adequate supply of water is available for the Specific Plan over the long-term, the decision of whether or not the Nickel Water agreement should be extended or otherwise canceled cannot occur without first obtaining CLWA's concurrence. If the applicant, or its designee, seeks to not extend the Nickel Water agreement beyond its initial 35-year term, or seeks to cancel said agreement prior to the expiration of its initial 35-year period, or the expiration of the 35-year option period, if exercised, then the applicant, or its designee, must obtain CLWA's written concurrence and that concurrence must include findings to the effect that other equivalent water supplies are available at a comparable cost and that non-extension or cancellation of the agreement will not impact the water supplies of Newhall Ranch and the rest of the Santa Clarita Valley. (This measure is not applicable to the Landmark Village project, because Newhall's Nickel Water rights are not needed at this time to satisfy the water demand of the project or cumulative development in the Santa Clarita Valley. However, as stated above, the applicant</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>has stored Nickel Water in the Semitropic Groundwater Bank, and will continue to do so in future years.)</u>Not applicable.</p>	
	<p>SP 4.11-21 The applicant, in coordination with RWQCB staff, shall select a representative location upstream and downstream of the Newhall Ranch Specific Plan and sample surface and groundwater quality. Sampling from these two locations would begin upon approval of the first subdivision map and be provided annually to the RWQCB and County for the purpose of monitoring water quality impacts of the Specific Plan over time. If the sampling data results in the identification of significant new or additional water quality impacts resulting from the Specific Plan, which were not previously known or identified, additional mitigation shall be required at the subdivision map level. <u>(This measure is not applicable until subdivision map approval for the Landmark Village project.)</u></p> <p>SP 4.11-22 Beginning with the filing of the first subdivision map allowing construction on the Specific Plan site and with the filing of each subsequent subdivision map allowing construction, the Specific Plan applicant, or its designee, shall provide documentation to the County of Los Angeles identifying the specific portion(s) of irrigated farmland in the County of Los Angeles proposed to be retired from irrigated production to make agricultural water available to serve the subdivision. As a condition of subdivision approval, the applicant or its designee, shall provide proof to the County that the agricultural land has been retired prior to issuance of building permits for the subdivision. <u>(Consistent with this measure, the applicant of the Landmark Village project has</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><i>provided the County with the required documentation. As a condition of approval of the Landmark Village tract map, the applicant will provide proof to the County</i></p>	
	<p>SP 4.11-22 (continued)</p> <p><i>that the agricultural land in the County proposed to be retired from irrigated production, in fact, has been retired prior to issuance of building permits for the Landmark Village subdivision.)</i></p> <p>SP Condition of Approval</p> <p>Prior to approval of the first subdivision map which permits construction, a report will be provided by the applicant which evaluates methods to recharge the Saugus Aquifer within the Specific Plan, including the identification of appropriate candidate land areas for recharge. The report shall be subject to approval by the Department of Public Works (DPW) and other applicable regulatory agencies, as determined by DPW.</p>	
	<p><u>LV 4.10-1 Prior to the issuance of building permits associated with each subdivision map allowing construction within the Landmark Village site, the applicant shall pay Facility Capacity Fees to the Castaic Lake Water Agency (CLWA) in accordance with CLWA policies and procedures.</u></p>	
4.11 WASTEWATER DISPOSAL		
<p>Construction impacts would be less than significant, as portable, on-site sanitation facilities would be utilized during construction activities. The proposed Landmark Village project would generate a worst-case average total of 0.41 million gallons per day (mgd) of wastewater that would be treated by the Newhall Ranch WRP. The treatment capacity of the Newhall Ranch WRP would be 6.8 mgd, with a maximum flow of 13.8 mgd. Until the development of the Newhall Ranch WRP</p>	<p>SP 4.12-1 The Specific Plan shall reserve a site of sufficient size to accommodate a water reclamation plant to serve the Newhall Ranch Specific Plan. (This measure has been implemented by the Board of Supervisors' approval of the Newhall Ranch WRP within the boundary of the Specific Plan.)</p>	<p>With implementation of the identified mitigation measures, the proposed project's wastewater disposal impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p>

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<p>is complete, there are two options for the temporary conveyance and treatment of wastewater generated by the proposed project. The first option is to construct an initial phase of the Newhall Ranch WRP to serve the project site, with build-out of the WRP occurring over time as demand for treatment increases. As the WRP is intended to serve the Newhall Ranch Specific Plan area, of which Landmark Village is a part, the initial phase of the WRP would be designed and constructed to accommodate the project's predicted wastewater generation of 0.41 mgd. The second option would temporarily direct wastewater flows to the Valencia WRP until the first phase of the Newhall Ranch WRP is complete. Based on County Sanitation Districts of Los Angeles County (CSDLAC) <u>Santa Clarita Valley Sanitation District (SCVSD)</u> future wastewater generation estimates and the planned expansion of the Saugus and Valencia WRPs, the Valencia WRP would have sufficient capacity to temporarily accommodate the project's predicted wastewater generation of 0.41 mgd. For these reasons, wastewater disposal impacts would be less than significant.</p>	<p><i>(This mitigation measure is complete.)</i></p> <p>SP 4.12-2 A 5.8 to 6.9 mgd water reclamation plant shall be constructed on the Specific Plan site, pursuant to County, state and federal design standards, to serve the Newhall Ranch Specific Plan. (This measure will be implemented pursuant to the project-level analysis already completed for the Newhall Ranch WRP in the certified Newhall Ranch Specific Plan EIR.)</p> <p>SP 4.12-3 The Conceptual Backbone Sewer Plan shall be implemented pursuant to County, state and federal design standards.</p> <p>SP 4.12-4 Prior to recordation of each subdivision permitting construction, the applicant of each subdivision shall obtain a letter from the new County sanitation district stating that treatment capacity will be adequate for that subdivision.</p> <p>SP 4.12-5 All facilities of the sanitary sewer system will be designed and constructed for maintenance by the County of Los Angeles Department of Public Works and the County Sanitation Districts of Los Angeles County, and/or the new County sanitation district or similar entity in accordance with their manuals, criteria, and requirements.</p>	
	<p>SP 4.12-6 Pursuant to Los Angeles County Code, Title 20, Division 2, all industrial waste pretreatment facilities shall, prior to the issuance of building permits, be reviewed by the County of Los Angeles Department of Public Works, Industrial Waste Planning and Control Section and/or the new County sanitation district, to determine if they would be subject to an Industrial Wastewater Disposal Permit.</p> <p>SP 4.12-7 Each subdivision permitting construction shall be required to be annexed into the Los Angeles County Consolidated Sewer Maintenance</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	District.	
4.12 SOLID WASTE DISPOSAL		
<p>Site preparation (vegetation removal and grading activities) and construction activities would generate a total of approximately 20,556 tons (an average of approximately 4,111 tons per year of construction waste over the 5-year buildout of the project assuming no recycling), or approximately 10,278 total tons assuming a 50 percent diversion rate. Upon buildout, the Landmark Village project would generate approximately 21,439 pounds of solid waste per day, or approximately 3,913 tons per year, assuming no solid wastes from the project would be recycled (a worst-case scenario). The project may also generate household types of hazardous waste. Cumulative development within the Santa Clarita Valley would generate 395,553 tons per year of solid waste, as well as hazardous waste, assuming no recycling. The project's share of 3,913 tons per year would represent 0.99 percent of this total. Mitigation has been identified to reduce construction and operation wastes to the extent feasible. Los Angeles County's ("County") landfills have been assessed and approved to have adequate capacity to service the existing population and planned growth until the year 2017. Capacity is projected to extend beyond the year 2017, when combined with other events that have expanded landfill capacity within the County,</p>	<p>SP 4.15-1 Each future subdivision which allows construction within the Newhall Ranch Specific Plan shall meet the requirements of all applicable solid waste diversion, storage, and disposal regulations that are in effect at the time of subdivision review. Current applicable regulations include recycling areas that are:</p> <ul style="list-style-type: none"> • compatible with nearby structures; • secured and protected against adverse environmental conditions; • clearly marked, and adequate in capacity, number and distribution; • in conformance with local building code requirements for garbage collection access and clearance; • designed, placed and maintained to protect adjacent developments and transportation corridors from adverse impacts, such as noise, odors, vectors, or glare; 	<p>Even with mitigation, the project's solid and hazardous waste impacts would be considered significant and unavoidable. In addition, cumulative solid and hazardous waste impacts would be considered significant and unavoidable.</p>
<p>(continued) such as recycling programs. Additionally, there is a potential for alternative solid waste disposal technologies to be developed and legislatively approved in the future; given the market forces that drive the solid waste industry, which could substantially reduce landfill disposal. However, currently, land suitable for landfill development or expansion is quantitatively finite and limited due to numerous environmental, regulatory, and political constraints. Therefore, until other disposal alternatives adequate to serve existing and future uses for the foreseeable future are employed, the potential project and cumulative solid and hazardous waste impacts are considered significant and unavoidable.</p>	<p>SP 4.15-1 (continued)</p> <ul style="list-style-type: none"> • in compliance with federal, state, or local laws relating to fire, building, access, transportation, circulation, or safety; and • convenient for persons who deposit, collect, and load the materials. <p>SP 4.15-2 Future multi-family, commercial, and industrial projects within the Specific Plan shall provide accessible and convenient areas for collecting and loading recyclable materials. These areas are to be clearly marked and adequate in capacity, number, and distribution to serve the development.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>SP 4.15-3 The first purchaser of each residential unit within the Specific Plan shall be given educational or instructional materials which will describe what constitutes recyclable and hazardous materials, how to separate recyclable and hazardous materials, how to avoid the use of hazardous materials, and what procedures exist to collect such materials.</p> <p>SP 4.15-4 The applicant of all subdivision maps which allow construction within the Specific Plan shall comply with all applicable future state and Los Angeles County regulations and procedures for the use, collection and disposal of solid and hazardous wastes.</p> <p>LV 4.12-1 The project shall comply with Title 20, Chapter 20.87, of the Los Angeles County Code, Construction and Demolition Debris Recycling. The project proponent shall also prepare a Recycling and Reuse Plan to recycle, at a minimum, 50 percent of the construction and demolition debris, which shall be submitted to the Los Angeles County Environmental Programs Division.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.13 SHERIFF SERVICES		
<p>The Los Angeles County (County) Sheriff’s Department provides the primary law enforcement services for the Newhall Ranch Specific Plan site and the surrounding Santa Clarita Valley. Additionally, the Department of California Highway Patrol (CHP) provides traffic regulation enforcement; emergency incident management; and service and assistance on Interstate 5 (I-5), State Route (SR)-126, SR-14, and other major roadways in unincorporated portions of the Santa Clarita Valley area. The Sheriff’s Department current officer-to-population ratio, without the proposed project, is less than the desired level of service set by the County. The CHP’s service levels within unincorporated portions of the Santa Clarita Valley also are considered less than adequate at this time.</p> <p>Buildout of the Landmark Village project would significantly increase the demand for law enforcement and traffic-related services, both on the project site and within the local vicinity, in terms of the number of personnel and amount of equipment needed to adequately provide law enforcement services. Based on the Department’s standard deputy-to-resident ratio, the proposed project would require the services of an additional four sworn Sheriff’s Department officers. Payment of the law enforcement facilities fees (see Los Angeles County Code, ch. 22.74, sec. 22.74.010, et seq.) and new tax revenues would mitigate impacts to the Sheriff’s Department to a less-than-significant level. Additionally, although not made necessary by the project, the applicant has entered into negotiations with the Sheriff’s Department for the provision of a station site that would serve the entire Specific Plan site. Thus, the proposed project would not contribute to any cumulatively considerable impacts to Sheriff services.</p> <p>The proposed project also would increase demands for CHP services in the project area. Through increased revenues generated by the project proposed (via motor vehicle registration and drivers license fees paid by new on-site residents and businesses), the project would generate more than sufficient funding for the additional staffing and</p>	<p>SP 4.17-1 As subdivision maps are submitted to the County for approval in the future, the applicant shall incorporate County Sheriff’s Department design requirements (such as those pertaining to site access, site security lighting, etc.) which will reduce demands for Sheriff’s service to the subdivisions and which will help ensure adequate public safety features within the tract designs.</p> <p>LV 4.13-1 Construction signs shall be posted with a reduced construction zone speed limit. These signs shall be posted to the satisfaction of the California Highway Patrol.</p> <p>LV 4.13-2 Prior to the commencement of construction activities, the project applicant, or its designee, shall retain the services of a private security company to patrol the construction site(s), as necessary, to minimize the potential for trespass, theft and other unlawful activity associated with construction-related activities.</p> <p>LV 4.13-3 Prior to the commencement of construction activities, the project applicant, or its designee shall prepare an approved traffic management plan for construction activities affecting rights-of-way within the jurisdiction of Caltrans and the Los Angeles County Department of Public Works.</p> <p>LV 4.13-4 Prior to the issuance of building permits for commercial, office, and industrial development, and for single-family and multi-family residential development where a Capital Improvement/Construction Plan has been adopted, the project applicant, or its designee shall pay the law enforcement facilities fee required by the Los Angeles County Code.</p>	<p>With implementation of the identified mitigation measures, the proposed project’s Sheriff services impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p>

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.13 SHERIFF SERVICES (continued)		
<p>(continued) equipment that would be needed to serve the project area, including future demands. This funding can and should be allocated to the CHP by the State CHP for the Santa Clarita Valley station to meet projected demands. Therefore, project impacts to the CHP would be less-than-significant, and would not contribute to any cumulatively considerable impacts to CHP services.</p> <p>Construction of the proposed project would increase both the incidence of petty crimes on the site and construction traffic on SR-126, which may potentially delay emergency vehicles traveling through the area. However, by retaining the services of a private security company to patrol the project construction site, and by implementing a construction traffic control plan, any potentially significant construction-related impacts to law enforcement services would be reduced to a less-than-significant level.</p> <p>Finally, new resident and daytime populations (employees and visitors) at the project site would be subject to the same potential hazards as existing County residents. It is expected that State and County emergency evacuation plans would be implemented (and amended as necessary) to provide for the safe evacuation of all County residents and employees. Therefore, no significant impacts would occur relative to emergency evacuation in the event of a natural or man-made disaster.</p> <p>Construction of the proposed project would increase the incidence of petty crimes on the site and also would increase construction traffic on SR-126 that may potentially delay emergency vehicles traveling through the area. However, by retaining the services of a private security company to patrol the project construction site, and by implementing a construction traffic control plan, any potentially significant construction-related impacts to law enforcement services would be reduced to a level below significant.</p>	<p>LV 4.13-4 Prior to the issuance of building permits for commercial, office, and industrial development, and for single-family and multi-family residential development where a Capital Improvement/Construction Plan has been adopted, the project applicant, or its designee shall pay the law enforcement facilities fee required by the Los Angeles County Code.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.13 SHERIFF SERVICES (continued)		
<p>The proposed project also would increase demands for CHP services in the project area. Through increased revenues generated by the project as it builds out (via motor vehicle registration and drivers license fees paid by new on-site residents and businesses), the funding for additional staffing and equipment would be made available to the CHP for allocation by the state CHP office to the Santa Clarita Valley station to meet future demands. Therefore, project-related impacts to the CHP would be less than significant.</p>		
4.14 FIRE PROTECTION SERVICES		
<p>Fire protection and emergency medical response services for the Landmark Village project and the surrounding area are provided by the County’s Fire District. Nine fire stations and three fire camps provide fire protection services for the Santa Clarita Valley area. Fire Station 76, located at 27223 Henry Mayo Drive in Valencia is the closest station to the project site. The closest available district response units would provide fire protection services. Should a significant incident occur, the entire resources of the Fire Department, not just the stations closest to the site, would serve the project. The County’s Fire Department and a franchise private ambulance company also provide paramedic services to the area.</p> <p>The Landmark Village project site is located in an area that has been designated as a Very High Fire Hazard Severity Zone (formerly called Fire Zone 4) by the County’s Fire Department, which denotes the County Forester’s highest fire hazard potential.</p> <p>The applicant is currently in discussions with the County’s Fire Department with respect to the required MOU for Newhall Ranch. At this time, it is expected that the permanent off-site fire station to be constructed at the Del Valle Training Facility would ultimately provide the fire protection services for the Landmark Village project. As part of this negotiation the MOU process, The general locations of three fire stations within the Newhall Ranch Specific Plan have been agreed upon at this</p>	<p>SP 4.18-1 At the time of final subdivision maps permitting construction in development areas that are adjacent to Open Area and the High Country SMA, a Wildfire Fuel Modification Plan shall be prepared and submitted for approval by the County Fire Department. The Wildfire Fuel Modification Plan shall include the following construction period requirements: (a) a fire watch during welding operations; (b) spark arresters on all equipment or vehicles operating in a high fire hazard area; (c) designated smoking and non-smoking areas; and (d) water availability pursuant to County Fire Department requirements. The wildfire fuel modification plan shall depict a fuel modification zone in conformance with the Fuel Modification Ordinance in effect at the time of subdivision. Within the zone, tree pruning, removal of dead plant material and weed and grass cutting shall take place as required by the County Forester. Fire resistant plant species containing habitat value may be planted in the fuel modification zone.</p>	<p>With implementation of the identified mitigation measures, the proposed project’s fire protection services impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p>

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.14 FIRE PROTECTION SERVICES (continued)		
<p>(continued) time. One station would be located within the Landmark Village site. In addition, stations are planned for within both the Mission Village and Potrero Village sites to the west and southwest of the Landmark Village project site, respectively. Until such time as the Del Valle first of the fire stations is completed, existing Fire Station No. 76 would serve the project site.</p> <p>The proposed project would be required to meet all County codes and requirements relative to providing adequate fire protection services to the site during both the construction and operational stages of the project. As a result, the project would not diminish the staffing or the response times of existing fire stations in the Santa Clarita Valley, nor would it create a special fire protection requirement on the site that would result in a decline in existing service levels. Therefore, by implementing the adopted Specific Plan mitigation measures in combination with the recommended project-specific mitigation, the proposed project would not have a significant project or cumulative impact on fire protection services or fire hazards in Santa Clarita Valley</p>	<p>SP 4.18-2 Each subdivision and site plan for the proposed Specific Plan shall provide sufficient capacity for fire flows of 1,250 gallons per minute (gpm) at 20 pounds per square inch (psi) residual pressure for a two hour duration for single family residential units, and 5,000 gpm at 20 psi residual pressure for a five-hour duration for multi-family residential units and commercial/retail uses, or whatever fire flow requirement is in effect at the time of subdivision and site plan approval.</p> <p>SP 4.18-3 Each subdivision map and site plan for the proposed Specific Plan shall comply with all applicable building and fire codes and hazard reduction programs for Fire Zones 3 and 4 that are in effect at the time of subdivision map and site plan approval.</p> <p>SP 4.18-4 The developer will provide funding for three fire stations to the Consolidated Fire Protection District of Los Angeles County (the "Fire District") in lieu of developer fees. The developer will dedicate two fire station sites for the two fire stations located in Newhall Ranch. The Fire District will dedicate the site for the fire station to be located at the Del Valle Training Facility. Each fire station site will have a building pad consisting of a net buildable area of 1 acre. If the cost of constructing the three fire stations, providing and dedicating the two fire station sites, and providing 3-engines, 1 paramedic squad and 63 percent of a truck company exceeds the developer's developer fee obligation for the Newhall Ranch development as determined by the Fire District, the Fire District will fund the costs in excess of the fee obligation.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.14 FIRE PROTECTION SERVICES (continued)		
	<p>SP 4.18-4 (continued)</p> <p>Two of the three fire stations to be funded by the developer will not exceed 6,000 square feet; the third fire station to be funded by the developer will not exceed 8,500 square feet. The Fire District, will fund the cost of any space/square footage of improvement in excess of these amounts as well as the cost of the necessary fire apparatus for any such excess square footage of improvements. The cost of three fire engines, a proportionate share of a truck and one squad to be provided by the developer will be determined based upon the apparatus cost at the time the apparatus is placed in service.</p> <p>The Fire District and the developer will mutually agree to the requirements of first-phase protection requirements based upon projected response/travel coverage. Such mutual agreement regarding first-phase fire protection requirements (“fire protection plan”) and the criteria for timing the development of each of the three fire stations will be defined in a Memorandum of Understanding between the developer and the Fire District. Delivery of fire service for Newhall Ranch will be either from existing fire stations or one of the three fire stations to be provided by the developer pursuant to this section. Prior to the commencement of the operation of any of the three fire stations, fire service may be delivered to Newhall Ranch from existing fire stations or from temporary fire stations to be provided by the developer at mutually agreed-upon locations, to be replaced by the permanent stations which will be located within the</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.14 FIRE PROTECTION SERVICES (continued)		
	<p>SP 4.18-4 (continued) Newhall Ranch development. The developer and the Fire District will annually review the fire protection plan to evaluate development and market conditions and modify the Memorandum of Understanding accordingly. <i>(This measure has been superseded by the ongoing MOU negotiations process. Mitigation Measure LV 4.14-2 contains the updated requirements.)</i></p> <p>LV 4.14-1 Prior to approval of a final subdivision map for the project, the applicant must prepare and submit for approval by the County Fire Department a fuel modification plan, a landscape plan and an irrigation plan for the project, as required by Section 1117.2.1 of the County of Los Angeles Fire Code.</p> <p>LV 4.14-2 Prior to the issuance of any building permits, the applicant must obtain approval of a Memorandum of Understanding (MOU) from the Fire Chief of the Fire District that sets out requirements necessary to fully mitigate all impacts of the Newhall Ranch Project on fire protection and emergency medical services. The MOU will include the provisions for apparatus, land, construction and equipping of fire stations, and other requirements necessary to fully mitigate the impacts of the Newhall Ranch Project on emergency services. For the Landmark Project, the MOU will require a fully equipped fire stations that is constructed on 1.25 acres and built to Fire District approved requirements/specifications, and vehicle apparatus (a fully equipped pumper engine and paramedic squad) be conveyed by applicant to the Fire District prior to the issuance of the 723rd certificate of occupancy.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.14 FIRE PROTECTION SERVICES (continued)		
	<p>LV 4.14-3 If the project applicant alters the Fire District’s road access, it must provide paved access acceptable to the Fire District from Chiquito Canyon Road to the Del Valle facility.</p> <p>LV 4.14-4 The proposed development shall provide multiple ingress/egress access for the circulation of traffic, and emergency response issues. Said determinations shall be approved through the tentative map approval.</p> <p>LV 4.14-5 The development of this project shall comply with all applicable code and ordinance requirements for construction, access, water mains, fire flows and fire hydrants. Specifics for said requirements shall be established during the review and approval process of the tentative map.</p> <p>LV 4.14-6 This property is located within the area described by the Forester and Fire Warden as a Fire Zone 4, Very High Fire Hazard Severity Zone (VHFHSZ). All applicable fire code and ordinance requirements for construction, access, water mains, fire hydrants, fire flows, brush clearance and fuel modification plans, must be met.</p> <p>LV 4.14-7 Specific fire and life safety requirements for the construction phase will be addressed at the building fire plan check. There may be additional fire and life safety requirements during this time.</p>	
	<p>LV 4.14-8 Every building constructed shall be accessible to Fire Department apparatus by way of access roadways, with an all-weather surface of not less than the prescribed width and indicated on the Tentative or Exhibit "A" maps. The roadway shall be extended to within 150 feet of all portions of the exterior walls when measured</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>by an unobstructed route around the exterior of the building.</p> <p>LV 4.14-9 Access roads shall be maintained with a minimum of 10 feet of brush clearance on each side. Fire access roads shall have an unobstructed vertical clearance clear-to-sky with the exception of protected tree species. Protected tree species overhanging fire access roads shall be maintained to provide a vertical clearance of 13 feet, 6 inches. Applicant to obtain all necessary permits prior to the commencement of trimming of any protected tree species.</p> <p>LV 4.14-10 The maximum allowable grade shall not exceed 15 percent except where topography makes it impractical to keep within such grade; in such cases, an absolute maximum of 20 percent will be allowed for up to 150 feet in distance. The average maximum allowed grade, including topographical difficulties, shall be no more than 17 percent. Grade breaks shall not exceed 10 percent in 10 feet.</p> <p>LV 4.14-11 When involved with a subdivision in unincorporated areas within the County of Los Angeles, Fire Department, requirements for access, fire flows and hydrants are addressed at the Los Angeles County Subdivision Committee meeting during the subdivision tentative map stage.</p>	
	<p>LV 4.14-12 Fire sprinkler systems are required in some residential and most commercial occupancies. For those occupancies not requiring fire sprinkler systems, it is encouraged that fire sprinkler systems be installed. This will reduce potential fire and life losses. Systems are now technically and economically feasible for residential use.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>LV 4.14-13 Prior to construction, the following items shall be addressed:</p> <ul style="list-style-type: none"> a. Installation and inspection of the required all weather access to be provided as determined by building permit issuance. b. Fire hydrants shall be installed and tested prior to the clearance for the commencement of construction. <p><u>INSTITUTIONAL:</u></p> <p>LV 4.14-14 The development may require fire flows up to 8,000 gpm at 20 psi residual pressure for up to a four-hour duration as outlined in the 2002 County of Los Angeles Fire Code Appendix III-AA. Final fire flows will be based on the size of buildings, their relationship to other structures, property lines, and types of construction used.</p> <p>LV 4.14-15 Fire hydrant spacing shall be based on fire flow requirements as outlined in the 2002 County of Los Angeles Fire Code Appendix III-BB. Additional hydrants will be required if hydrant spacing exceeds specified distances.</p> <p>LV 4.14-16 All access devices and gates shall comply with California Code of Regulations, Title 19, Article 3.05 and Article 3.16, Los Angeles County Fire Department Regulation #5.</p>	
	<p><u>COMMERCIAL/HIGH-DENSITY RESIDENTIAL:</u></p> <p>LV 4.14-17 The development may require fire flows up to 5,000 gpm at 20 psi residual pressure for up to a five-hour duration. Final fire flows will be based on the size of buildings, their relationship to other structures, property lines, and types of construction used. Fire flows shall be established as part of the tentative map review process with the submittal of architectural details to determine actual flow requirement. If adequate architectural detail is unavailable during the tentative map review process,</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>maximum fire flows will be established with the ability of the fire flow to be changed during the actual architectural plan review by Fire Prevention Engineering for building permit issuance.</p> <p>LV 4.14-18 Fire hydrant spacing shall be 300 feet and shall meet the following requirements:</p> <ul style="list-style-type: none"> a. No portion of lot frontage shall be more than 200 feet via vehicular access from a public fire hydrant. b. No portion of a building shall exceed 400 feet via vehicular access from a properly spaced public fire hydrant. c. Additional hydrants will be required if hydrant spacing exceeds specified distances. d. When cul-de-sac depth exceeds 200 feet on a commercial street, hydrants shall be required at the corner and mid-block. e. A cul-de-sac shall not be more than 500 feet in length, when serving land zoned for commercial use. 	
	<p>LV 4.14-19 Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road. A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in length and at the end of all cul-de-sacs.</p> <p>LV 4.14-20 All on-site driveways/roadways shall provide a minimum unobstructed width of 26 feet, clear-to-sky. The on-site driveway is to be within 150 feet of all portions of the exterior walls of the first story of any building. The centerline of the access driveway shall be located parallel to, and within 30 feet of an exterior wall on one side of the proposed structure.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>LV 4.14-21 Driveway width for non-residential developments shall be increased when any of the following conditions will exist:</p> <ul style="list-style-type: none"> a. Provide 34 feet in width, when parallel parking is allowed on one side of the access roadway/driveway. Preference is that such parking is not adjacent to the structure. b. Provide 42 feet in width, when parallel parking is allowed on each side of the access roadway/driveway. c. Any access way less than 34 feet in width shall be labeled "Fire Lane" on the final recording map, and final building plans. d. For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING – FIRE LANE" in 3-inch-high letters. Driveway labeling is necessary to ensure access for Fire Department use. 	
	<p><u>SINGLE-FAMILY/TWO-FAMILY DWELLING UNITS:</u></p> <p>LV 4.14-22 Single-family detached homes shall require a minimum fire flow of 1,250 gpm at 20 psi residual pressure for a 2-hour duration. Two-family dwelling units (duplexes) shall require a fire flow of 1,500 gpm at 20 psi residual pressure for a 2-hour duration. When there are five or more condominium units are taking access on a single driveway, the minimum fire flow shall be increased to 1,500 gpm at 20 psi residual pressure for a 2-hour duration.</p> <p>LV 4.14-23 Fire hydrant spacing shall be 600 feet and shall meet the following requirements:</p> <ul style="list-style-type: none"> a. No portion of lot frontage shall be more than 450 feet via vehicular access from a 	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>public fire hydrant.</p> <ul style="list-style-type: none"> b. Lots of 1 acre or more shall place no portion of a structure where it exceeds 750 feet via vehicular access from a properly spaced public fire hydrant. c. When cul-de-sac depth exceeds 450 feet on a residential street, fire hydrants shall be required at the corner and mid-block. d. Additional hydrants will be required if hydrant spacing exceeds specified distances during the tentative map review process or building permit plan check. 	
	<p>LV 4.14-24 Streets or driveways within the development shall be provided with the following:</p> <ul style="list-style-type: none"> a. Provide 36 feet in width on all streets where parking is allowed on both sides. b. Provide 34 feet in width on cul-de-sacs up to 700 feet in length. This allows parking on both sides of the street. c. Provide 36 feet in width on cul-de-sacs from 701 to 1,000 feet in length. This allows parking on both sides of the street. d. For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING – FIRE LANE" in 3-inch-high letters. Driveway labeling is necessary to ensure access for Fire Department use. e. Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road. <p>LV 4.14-25 A Fire Department approved turning area shall be provided for all driveways exceeding 150</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	feet in length and at the end of all cul-de-sacs.	
4.15 EDUCATION		
<p>The Castaic Union School District (Castaic District) and the William S. Hart Union High School District (Hart District) currently provide public elementary, junior high/middle school and senior high school education in the Landmark Village project area. The Castaic District provides elementary school service (Kindergarten [K] and grades 1–6) and middle school service (grades 7 and 8) to the project site. The Hart District provides junior high school (grades 7 and 8) and senior high school (grades 9–12) service. The Landmark Village project would generate an estimated 299<u>343</u> new elementary students, 138<u>5</u> new middle school students, and 173<u>2</u> new senior high school students for the two Districts at build-out.</p> <p>The “School Facilities Funding Agreement Between the Castaic Union School District and Newhall Land and Farming Company” (Castaic School Funding Agreement), effective November 20, 1997, and included in this EIR (Appendix 4.15), would mitigate Landmark Village impacts on the Castaic District. Under the Castaic School Funding Agreement, the applicant and the Castaic District have provided a financing schedule and a financing plan, in combination with certain mitigation payments, which will provide permanent facilities, including land, buildings, furnishings and equipment to house grades K–5 and 6–8 students who will reside in the Riverwood Village Planning Area of the Newhall Ranch Specific Plan. The proposed Landmark Village project is part of the Riverwood Village Planning Area. Once implemented, the Castaic School Funding Agreement would fully mitigate Landmark Village’s direct and cumulative impacts on the Castaic District’s educational facilities.</p>	<p>SP 4.16-1 The Specific Plan developer shall reserve five elementary schools sites, one junior high school site and one high school site, of 7 to 10, 20 to 25, and 40 to 45 acres in size, respectively, depending upon adjacency to local public parks and joint use agreements.</p> <p>SP 4.16-2 The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land and Farming Company and the Newhall School District.</p> <p>SP 4.16-3 The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land and Farming Company and the William S. Hart Union High School District.</p> <p>SP 4.16-4 The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land & Farming Company and the Castaic Union School District.</p> <p>SP 4.16-5 In the event that School District boundaries on the Specific Plan site remain unchanged, prior to recordation of all subdivision maps which allow construction, the developer of future subdivisions which allow construction is to pay to the Castaic Union School District the statutory school fee for commercial/industrial square footage pursuant to Government Code Sections 65995 and 65996, unless a separate agreement to the contrary is reached with the District.</p>	<p>With implementation of the identified mitigation measures, the proposed project’s education impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p>

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.15 EDUCATION (continued)		
<p>Project-specific impacts on the Hart District would be mitigated through the separate “School Facilities Funding Agreement Between the William S. Hart Union High School District and The Newhall Land and Farming Company” (Hart School Funding Agreement), effective October 1998 <u>December 1, 2009</u>, and included in this EIR (Appendix 4.15). The Hart School Funding Agreement conditionally obligates The Newhall Land and Farming Company to provide up to three additional junior high schools and two additional senior high schools to the Hart District. Once implemented, the Hart School Funding Agreement would fully mitigate Landmark Village’s direct and cumulative impacts on the Hart District’s educational facilities.</p> <p>Cumulative student generation under the Development Monitoring System (DMS) Build-Out Scenario and the Santa Clarita Valley Build-Out Scenario cannot be accommodated by existing or planned facilities within the school facilities that serve the valley; therefore, cumulative impacts on the school districts would be significant. Compliance, as appropriate, with existing School Facilities Funding Agreements and other mechanisms (e.g., Senate Bill [SB] 50, the Valley-Wide Joint Fee Resolution, and/or new school facilities funding agreements) would reduce cumulative development impacts on the school districts to below a level of significance and no significant unavoidable cumulative impacts to educational services are anticipated.</p> <p><i>No significant unavoidable impacts would result from implementation of the proposed Landmark Village project.</i></p>		

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.16 PARKS AND RECREATION		
<p>The proposed Landmark Village project includes a 9.74-net-acre Community Park. The Community Park is consistent with the Specific Plan's Land Use Overlay Community Park designation for the area, and is located adjacent to a 9-acre elementary school. The project also includes 5.23 acres of private recreation areas, 3.13 acres of the Specific Plan's Regional River Trail, and 4.10 acres of community trails. Implementation of these project components results in a parkland dedication equivalent to approximately 7.1 acres per 1,000 persons, which is greater than the Los Angeles County (County) and Quimby Act requirements of 3.0 acres per 1,000 persons. The proposed project includes a hierarchy of community, local and other trails connecting to the Specific Plan's Regional River Trail, which traverses the Santa Clara River. The basic Quimby park land obligation for the subdivision is 10.78 net acres of park land; pursuant to the Newhall Ranch Specific Plan, the 15.45 acres by which the subdivision exceeds its Quimby obligation will be credited against other subdivisions within the Newhall Ranch Specific Plan area. Measured against the identified significance thresholds, the proposed Landmark Village project meets County parkland requirements, exceeds Quimby Act parkland standards, and would not result in significant impacts to local parks and recreation facilities.</p> <p>Implementation of cumulative projects would incrementally increase demand for local park facilities. However, the proposed project would meet County parkland requirements and exceed the Quimby Act parkland standards. Further, future development projects would be subject to the Quimby Act and County requirements, which would mitigate the demand associated with each future project. As a result, no significant cumulative impacts on County parks and recreation facilities would occur with implementation of the proposed project.</p> <p>Because the proposed Landmark Village project meets the County parkland requirements and exceeds the Quimby Act</p>	<p>SP 4.20-1 Development of the Newhall Ranch Specific Plan will provide the following acreages of parks and open area:</p> <ul style="list-style-type: none"> • Ten public Neighborhood Parks totaling 55 acres, • Open Areas totaling 1,106 acres of which 186 acres are Community Parks, • High Country Special Management Area of 4,214 acres, • River Corridor Special Management Area of 819 acres, • A 15-acre lake, • An 18-hole golf course, and • A trail system consisting of: <ul style="list-style-type: none"> – Regional River Trail, – Salt Creek Corridor, – Community trails, and – Unimproved trails. <p>SP 4.20-2 Prior to the construction of the proposed trail system, the Specific Plan applicant shall finalize the alignment of trails with the County Department of Parks and Recreation.</p> <p>SP 4.20-3 Trail construction shall be in accordance with the County of Los Angeles Department of Parks and Recreation trail system standards.</p> <p>Because the proposed Landmark Village project meets the County parkland requirements and exceeds the Quimby Act requirements, no further mitigation measures are required for the proposed project beyond those adopted as part of the Newhall Ranch Specific Plan.</p>	<p>With implementation of the identified mitigation measures, the proposed project's parks and recreation impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p>

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.16 PARKS AND RECREATION		
(continued) requirements, no further mitigation measures are required for the proposed project beyond those adopted as part of the Newhall Ranch Specific Plan.		
4.17 LIBRARY SERVICES		
<p>The project site of the proposed Landmark Village project is located in the Valencia Library Service area of the County of Los Angeles Public Library (County Library). In addition to the Valencia library, the Santa Clarita Valley area is served by three other County libraries (Newhall Library, Canyon Country Jo Anne Darcy Library, and Castaic Library) and the Santa Clarita Valley Bookmobile. Existing library space in the Santa Clarita Valley does not meet the County Library’s service level guidelines.</p> <p>Based on the County Library’s service level guidelines of 0.50 square foot of library facilities per capita and a collection size of 2.75 items (books, magazines, periodicals, audio, video, etc.) per capita, the development of the proposed project would require a total of 1,840 square feet of library facilities and 10,120 items. As part of the County’s approval of the Newhall Ranch Specific Plan, the County adopted a library mitigation measure requiring that the developer provide funding for the construction and development of library facilities on the Specific Plan site. The mitigation measure provides that, prior to issuance of the first residential building permit on Newhall Ranch, the County Librarian and the developer must develop a mutually acceptable “Library Construction Plan.” The plan must outline the library construction requirements and define elements such as location, size, funding, and timing of facilities. The Library Construction Plan, a completion schedule, land dedication criteria, and a funding plan must be defined and set forth in a MOU between the developer and the County Librarian. Revenues collected by the County library over the course of buildout of the project would partially fund library services in the new library. With mitigation, any potential impacts to library services caused by project construction and occupancy would be reduced to less than significant levels.</p>	<p>SP 4.19-1 The developer will provide funding for a maximum of two libraries (including the site(s), construction, furniture, fixtures, equipment, and materials) to the County Librarian. The developer will dedicate a maximum of two library sites for a maximum of two libraries located in Newhall Ranch in lieu of the land component of the County’s library facilities mitigation fee, in accordance with the provisions of Section 22.72.090 of Section 2 of Ordinance No. 98-0068. The actual net buildable library site area required and provided by the developer will be determined by the actual size of the library building(s), the Specific Plan parking requirements, the County Building Code, and other applicable rules.</p> <p>The total library building square footage to be funded by the developer will not exceed 0.35 net square feet per person. The developer’s funding of construction of the library(s) and furnishings, fixtures, equipment and materials for the library(s) will be determined based on the cost factors in the library facilities mitigation fee in effect at the time of commencement of construction of the library(s).</p> <p>Prior to County’s issuance of the first residential building permit of Newhall Ranch to the developer, the County Librarian and the developer will mutually agree upon the library construction requirements (location, size, funding and time of construction) based upon the projected development schedule and the</p>	<p>With implementation of the identified mitigation measures, the proposed project’s library services impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p>

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.17 LIBRARY SERVICES (continued)		
<p>With respect to cumulative impacts, new development occurring within the Santa Clarita Valley would increase demand for books and library space. However, payment of the Library Developer Fee at \$790.00 per residential unit (as of July 1, 2008), by other foreseeable regional projects would mitigate potentially significant cumulative impacts on the County Library to less than significant levels. <i>As stated above, the Library Construction Plan as set forth in a Memorandum of Understanding (MOU) between the developer and the County Librarian would mitigate library impacts resulting from the proposed project, and would be prepared in lieu of the County's Library Developer Fee.</i></p>	<p>SP 4.19-1 (continued)</p> <p>population of Newhall Ranch based on the applicable number of average persons per household included in the library facilities mitigation fee in effect at the time. Such mutual agreement regarding the library construction requirements ("Library Construction Plan") and the criteria for timing the completion of the library(s) will be defined in a MOU between the developer and the County Librarian. Such MOU shall include an agreement by the developer to dedicate sufficient land and pay the agreed amount of fees on a schedule to allow completion of the library(s) as described below. The developer's funding for library facilities shall not exceed the developer's fee obligation at the time of construction under the developer fee schedule.</p> <p>If two libraries are to be constructed, the first library will be completed and operational by the time of County's issuance of the 8,000th residential building permit of Newhall Ranch, and the second library will be completed and operational by the time of County's issuance of the 15,000th residential building permit of Newhall Ranch. If the County Librarian decides that only one library will be constructed, the library will be completed and operational by the time of County's issuance of the 10,000th residential building permit of Newhall Ranch.</p> <p>No payment of any sort with respect to library facilities will be required under Section 2.5.3.d. of the Specific Plan in order for the developer to obtain building permits for nonresidential buildings.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.18 AGRICULTURAL RESOURCES		
<p>Development of the Landmark Village tract map and related off-site improvements would convert to non-agricultural land uses 199 acres of Prime Farmland, 6 acres of Farmland of Statewide Importance, and 143 acres of Unique Farmland for a total of 348 acres of threshold criterion agricultural land. Additionally, site development would disturb 17 acres of Farmland of Local Importance and 600 acres of Grazing Land. No feasible mitigation exists to reduce the impacts resulting from the conversion of threshold criterion agricultural land to a less than significant level. The irreversible loss of 348 acres of threshold criterion agricultural land as a result of the Landmark Village project is considered a significant impact consistent with the findings of the Newhall Ranch Specific Plan Program EIR. Based on the applicable significance thresholds, the loss of Farmland of Local Importance and Grazing Land is not considered a significant impact.</p> <p><u>With respect to forest resources, the proposed Landmark Village tract map and related off-site improvements would not take place in areas zoned as forest land or timberland. Therefore, development of the project site would not conflict with such zoning or require a zone change from an existing forest land/timberland zone to a non-forest land/timberland zone, and there would be no impacts.</u></p> <p><u>The Landmark Village project site contains approximately 35.5 acres of native trees (upland coast live oaks, southern coast live oak riparian, and southern cottonwood-willow riparian) that are dense enough to qualify as "Forest Land" under Public Resources section 12220(g). These 35.5 acres represent approximately 3.4 percent of the 1,045-acre project site. Of these 35.5 acres, 8.3 acres would be permanently disturbed as a result of project development and 27.2 acres would be temporarily disturbed. Therefore, approximately 23.3 percent of the native forest land on-site would be lost due to development of the project. This is considered a significant impact, which is identified in EIR Section 4.4, Biota. Mitigation measures are included in that section that will mitigate the loss of these forest resources, thereby reducing the impact to a less-than-significant level.</u></p>	<p>SP 4.4-1 Purchasers of homes located within 1,500 feet of an agricultural field or grazing area are to be informed of the location and potential effects of farming uses prior to the close of escrow.</p> <p>SP 4.4-2 <u>New homes within 1,500 feet of farming uses within Ventura County, if any, are to be informed that agricultural activities within Ventura County are protected under the County's right-to-farm ordinance, and are to be provided with copies of the County's Amended Ordinance 3730-5/7/85. (This mitigation measure is not applicable to the Landmark Village tract map site due to its distance from Ventura County.)</u> Not applicable.</p> <p>LV 4.18-1 <u>In order to minimize the premature conversion of agricultural lands and to track that conversion, prior to issuance of the first grading permit in areas of Landmark Village where agricultural soils designated as prime farmland, unique farmland, and/or farmland of statewide importance exist (Pub. Resources Code section 21060.1), Newhall Land shall prepare a phasing map to document the phased discontinuation of existing agricultural activities located within the Landmark Village Project area over the course of its development.</u></p>	<p>The project-specific impacts resulting from the loss of prime agricultural land are considered significant and unavoidable. In addition, the cumulative conversion of prime agricultural land to non-agricultural uses constitutes a loss of an irreplaceable resource and is considered a significant and unavoidable cumulative impact.</p>

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.19 UTILITIES		
<p>The Landmark Village proposed project would require energy resources and infrastructure to serve the project site. Current projections for energy supply and demand by Southern California Edison (SCE) and the Southern California Gas Company (SCGC) indicate that these utility providers would have sufficient electricity and natural gas resources to serve the project site. In addition, the proposed project would comply with statewide energy efficiency requirements. Further, consistent with the Newhall Ranch Specific Plan Program EIR, providing electricity and natural gas to the Landmark Village project site would not require a considerable extension of distribution infrastructure.</p> <p>Importantly, several of Landmark Village's design features would reduce its demand for energy resources, and further ensure that all impacts to utilities-related resources are less than significant. First, Landmark Village's residential, commercial, and public buildings would exceed current state efficiency standards (i.e., Title 24 of the California Code of Regulations [2005]) by at least 15 percent, thereby reducing the overall demand for electricity and natural gas resources. In addition, the project applicant has committed to rely on renewable energy sources to meet a portion of the project's energy demands, and is evaluating the feasibility of energy efficient municipal lighting and smart meter programs. With implementation of the mitigation measures from the certified Newhall Ranch Specific Plan Program EIR, and implementation of the "green" project design features, the Landmark Village project is anticipated to result in less than significant impacts to electricity and natural gas resources and infrastructure.</p>	<p>SP 4.14-1 All development within the Specific Plan area shall comply with the Energy Building Regulations adopted by the California Energy Commission (Title 24 of the <i>California Administrative Code</i>).</p> <p>SP 4.14-2 Southern California Edison or other energy provider is to be notified of the nature and extent of future development on the Specific Plan site prior to recordation of all future subdivisions.</p> <p>SP 4.14-3 All future tract maps are to comply with Southern California Edison or other energy provider guidelines for grading, construction, and development within SCE easements.</p> <p>SP 4.14-4 Electrical infrastructure removals and relocations are to be coordinated between the Specific Plan engineer and Southern California Edison or other energy provider as each tract is designed and constructed.</p> <p>SP 4.14-5 All future tract maps are to be reviewed by Los Angeles County to ensure adequate accessibility to Edison or other energy provider facilities as a condition of their approvals.</p> <p>SP 4.14-6 Not applicable.</p>	<p>With implementation of the identified mitigation measures, the proposed project's utilities impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p>
4.19 UTILITIES (continued)		
	<p>SP 4.13-1 All development within the Specific Plan area shall comply with the Energy Building Regulations adopted by the California Energy Commission (Title 24 of the <i>California Administrative Code</i>).</p> <p>SP 4.13-2 A letter from the Southern California Gas</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>Company or other gas provider is to be obtained prior to recordation of all future subdivisions stating that service can be provided to the subdivision under construction.</p> <p>SP 4.13-3 The Specific Plan is to meet the requirements of SCGC in terms of pipeline relocation, grading in the vicinity of gas mains, and development within Southern California Gas Company easements. These requirements would be explicitly defined by SCGC at the future tentative map stage.</p> <p>SP 4.13-4 All potential buyers or tenants of property in the vicinity of Southern California Gas Company transmission lines are to be made aware of the line's presence in order to assure that no permanent construction or grading occurs over and within the vicinity of the high-pressure gas mains.</p> <p>Project design features that are recommended for incorporation as mitigation measures in Section 4.23, Global Climate Change, of this Recirculated EIR also would reduce the proposed project's demand for electricity and natural gas. As these measures are recommended for adoption and incorporation into a mitigation monitoring and reporting program, these measures can be relied upon in this analysis as feasible measures designed to reduce the proposed project's demand for energy resources.</p>	
	<p>The mitigation measures recommended in Section 4.23 are in addition to those adopted in the previously certified Newhall Ranch Specific Plan Program EIR. To indicate that the measures relate specifically to the Landmark Village project, each measure is preceded by "LV," which stands for Landmark Village. Accordingly, the applicable mitigation measures are: LV 4.23-1 through LV 4.23-7.</p> <p>In addition to the mitigation measures set forth above, the project applicant also is pursuing implementation of two</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>potentially feasible programs that may result in further energy demand reductions. As discussed extensively in Section 4.23, the project applicant has committed to working with Los Angeles County, SCE, and SCGC, as applicable, to evaluate the feasibility of energy efficient municipal lighting and smart meter programs.</p> <p>Please refer directly to Section 4.23, Global Climate Change, of this Recirculated EIR for additional information on the terms of the seven mitigation measures identified above and the two programs being evaluated for feasibility.</p>	
4.20 MINERAL RESOURCES		
<p>The Landmark Village project site, utility corridor, and borrow site are located within an MRZ-2 zone, which indicates that information exists which identifies the area as a location with significant mineral deposits present, or a location with a high likelihood of the presence of mineral deposits. The water tank site is located in the MRZ-3 zone, which indicates that mineral deposits are expected to occur in this area, but the extent of such deposits is unknown at the present time. However, neither the tract map site, utility corridor, borrow site, nor water tank site are the subjects of active mineral extraction operations. Further, the tract map site, utility corridor, borrow site, and water tank sites are not identified as a “locally-important mineral resource recovery site” or a “regionally significant construction aggregate resource area” by the County of Los Angeles General Plan or the Santa Clarita Valley Area Plan. In addition, at the time the Newhall Ranch site was designated by the County of Los Angeles as “Specific Plan,” which serves as the zoning designation for the property, there were no areas within Newhall Ranch used for mineral extraction. Under the Specific Plan designation, the area currently is zoned for development of various Specific Plan land uses and not long-term mineral extraction activities.</p>	None required	Less Than Significant
<p>The Specific Plan zoning designation allows for the development of a mixed-use planned community, with sand and gravel extraction activities allowed during tract grading and construction phases on the sites to be developed.</p>	None required	Less Than Significant

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<p>Additionally, extraction activities are permitted in the Visitor-Serving (VS) and Open Area (OA) zones under a conditional use permit, which is not proposed. Thus, the current zoning designation for the entire Newhall Ranch site allows the area to be available for mineral extraction uses on a limited basis in areas that are already proposed for, and in association with, development (i.e., on tentative tract map sites). Furthermore, the majority of mineral resources of value are expected to be located in the River Corridor and not on the project site, and, therefore, the continued availability of these resources would not be significantly affected by the proposed project. Therefore, project implementation will not result in a significant impact in relation to the loss of availability of a known mineral resource or a locally important mineral resource recovery site.</p>		
<p>4.21 ENVIRONMENTAL SAFETY</p>		
<p>The potential environmental safety impacts relative to development of the Landmark Village project site include soil contamination attributable to past and present agricultural activities, on-site petroleum (i.e., oil) drilling and pipeline activities, and the disposal of on-site hazardous materials debris. Hazardous materials generally include petroleum products (including oil and gasoline), automotive fluids (antifreeze, hydraulic fluid), paint, cleaners (dry cleaning solvents, cleaning fluids), and pesticides from agricultural uses (at higher concentrations). Byproducts generated as a result of activities using hazardous materials (such as dry cleaning solvents, oil, and gasoline) are considered hazardous waste. Contamination usually takes the form of a hazardous materials or waste spill in soil. Such contamination can penetrate soils into the groundwater table, resulting in the pollution of a local water supply. Commercial uses, particularly those using underground storage tanks (UST), are most common in causing such contamination.</p>	<p>SP 4.5-1 <u>All final school locations are to comply with the California State Board of Education requirement that no schools be sited within 100 feet from the edge of the right-of-way of 100–110 kV lines; 150 feet from the 220–230 kV lines; and 250 feet from the 345 kV lines. (This mitigation measure is not applicable to the Landmark Village project, because the school on the project site will be located over 500 feet from the nearest overhead transmission line.)</u></p> <p>Not applicable.</p> <p>SP 4.5-2 Only non-habitable structures shall be located within SCE easements.</p> <p>SP 4.5-3 Prior to issuance of grading permits, all abandoned oil and natural gas-related sites must be remediated to the satisfaction of the California Department of Oil and Gas, the Los Angeles County Hazardous Materials Control Program, the SCAQMD, and/or the RWQCB (Los Angeles region).</p> <p>SP 4.5-4 <u>All ongoing oil and natural gas operational sites adjacent to or in close proximity to residential, mixed-use, commercial, business park, schools</u></p>	<p>With implementation of the identified mitigation measures, the proposed project’s environmental safety impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p>

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>and local and Community Parks shall be secured by fencing and emergency access to these locations shall be provided. (This mitigation measure is not applicable to the Landmark Village project, because no ongoing oil and natural gas operational sites will occur within the project site.)</u></p> <p>Not applicable.</p> <p>SP 4.5-5 The Specific Plan is to meet the requirements of Southern California Gas Company (SCGC) in terms of pipeline relocation, grading in the vicinity of gas mains, and development within SCGC easements. These requirements would be explicitly defined at the future tentative map stage.</p>	
<p>Potential environmental safety impacts associated with the project site involve observed stained soil (including possible petroleum hydrocarbon contamination) near abandoned oil wells and pipelines, aboveground storage tanks (ASTs) and equipment storage areas. Unless mitigated, these potentially contaminated soils could result in significant impacts, especially if construction utilizing these soils, or contamination within these soils, was permitted without proper monitoring and testing. When remediated to local, state and federal standards, including re-abandonment procedures for previously abandoned wells and pipelines, any potentially significant impacts relative to these conditions would be reduced to below a level of significance and, therefore, would not result in environmental safety hazards to Landmark Village residents, employees and/or visitors or to adjacent properties.</p> <p>Another potential safety impact associated with the project site relates to the disposal of on-site debris, including asbestos-containing materials (ACMs). Unless appropriately disposed of, ACMs could result in safety hazards to project construction workers.</p>	<p>SP 4.5-6 All potential buyers or tenants of property in the vicinity of Southern California Gas Company transmission lines are to be made aware of the line’s presence in order to assure that no permanent construction or grading occurs over and within the vicinity of the high-pressure gas mains.</p> <p>SP 4.5-7 In accordance with the provisions of the Los Angeles County Building Code, Section 308(d), all buildings and enclosed structures that would be constructed within the Specific Plan located within 25 feet of oil or gas wells shall be provided with methane gas protection systems. Buildings located within 25 feet and 200 feet of oil or gas wells shall, prior to the issuance of building permits by the County of Los Angeles, be evaluated in accordance with the current rules and regulations of the State of California Division of Oil and Gas. <u>(To reflect updated provisions of the Los Angeles County Building Code, this mitigation measure is replaced by LV 4.21-6.)</u></p> <p>SP 4.5-8 In accordance with the provisions of the Los</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>Angeles County Building Code, Section 308(c), all buildings and structures located within 1,000 feet of a landfill containing decomposable material (in this case, Chiquita Canyon Landfill) shall be provided with a landfill gas migration protection and/or control system. <u>(To reflect updated provisions of the Los Angeles County Building Code, this mitigation measure is replaced by LV 4.21-6.)</u></p> <p>SP 4.5-9 In accordance with the provisions of the Los Angeles County Code, Title 11, Division 4, Underground Storage of Hazardous Materials regulations, the County of Los Angeles Department of Public Works shall review, prior to the issuance of building permits by the County of Los Angeles, any plans for underground hazardous materials storage facilities (e.g., gasoline) that may be constructed or installed within the Specific Plan.</p>	
<p>The presence of pesticides in the soils from historic agricultural operations, and the continuing use of pesticides in connection with ongoing agricultural activities, constitutes a potential impact, although the impact does not rise to a significant level. Soil sampling has been conducted to determine on-site concentrations of pesticides. The results showed no concentration of hazardous pesticides exceeding the residential or industrial use Preliminary Remediation Goals. Additionally, no Proposition 65 pesticides have been used on the Landmark Village project site. With respect to the future use of pesticides, due to the regulation of those pesticides used by agricultural activities occurring on Newhall Ranch, including the chemical and physical properties of those pesticides used, the requirement to use the pesticides in accordance with manufacturer specifications, and the mode of application of the pesticides, it is not expected that humans would be subject to either acute overexposure or chronic exposure to any of the pesticides used. Therefore, the on-site use of pesticides would not create a potential public health hazard, and would create</p>	<p>LV 4.21-1 During grading operations, those areas of the Landmark Village tract map property, the Adobe Canyon borrow site and the Chiquito Canyon grading site identified as formerly containing above-ground storage tanks, current agricultural storage areas and current soil staining by the Phase I Environmental Site Assessment of Landmark Village Tentative Tract Map No. 53108, Highway 126, Newhall Ranch, California (BNA Environmental, May 2004) and Addendum Letter Phase I Environmental Site Assessment of Proposed Water Tank Locations and Utility Corridor Easements Associated With the Proposed Landmark Village Development Tentative Tract Map No. 53108, State Highway 126, Newhall Ranch, California (BNA Environmental, September 2004) (see Appendix 4.21), shall be investigated for the presence of petroleum</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<p>no significant impact to the development property or its residents.</p>	<p>hydrocarbons and hazardous materials and/or wastes, and, where necessary, shall be remediated in conformance with applicable federal, state, and local laws, to the satisfaction of the California Department of Conservation, Division of Oil and Gas, the Los Angeles County Hazardous Materials Control Program, the SCAQMD, and/or the RWQCB (Los Angeles region).</p> <p>LV 4.21-2 During grading operations, all former oil wells located on the Landmark Village tract map property, the Adobe Canyon borrow site and the Chiquito Canyon grading site shall be reabandoned according to the requirements of the California Department of Conservation, Division of Oil and Gas, if such sites are to be disturbed or are located in an area of development.</p>	
	<p>LV 4.21-3 During grading operations, all pipelines located on the Landmark Village tract map property or the Chiquito Canyon grading site that will no longer be used to transport oil products shall be reabandoned according to the requirements of the California Department of Conservation, Division of Oil and Gas. The soil beneath these pipelines shall be assessed for petroleum hydrocarbons. Any contaminated soil located within grading operations or development areas shall be remediated in conformance with applicable federal, state, and local laws, to the satisfaction of the California Department of Conservation, Division of Oil and Gas, the Los Angeles County Hazardous Materials Control Program, the SCAQMD, and/or the RWQCB (Los Angeles region). Any pipeline to remain in use shall be assessed for hydrocarbon leakage.</p> <p>LV 4.21-4 During grading operations, all scattered suspect</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>asbestos-containing material debris located on the Landmark Village tract map property, the Adobe Canyon borrow site and the Chiquito Canyon grading site shall be disposed of in accordance with applicable federal, state, and local requirements.</p> <p>LV 4.21-5 In the event that previously unidentified, obvious, or suspected hazardous materials, contamination, underground storage tanks, or other features or materials that could present a threat to human health or the environment are discovered during construction, construction activities shall cease immediately until the subject site is evaluated by a qualified professional. Work shall not resume until appropriate actions recommended by the professional have been implemented to demonstrate that contaminant concentrations do not exceed risk-based criteria.</p> <p><u>LV-4.21-6 In accordance with the provisions of the 2008 Los Angeles County Building Code (Title 26), Section 110.4, all buildings and enclosed structures that would be constructed within the Specific Plan located within 25 feet of oil or gas wells shall be designed according to recommendations contained in a report prepared by a licensed civil engineer and approved by the Building Official. Buildings located within 25 feet and 200 feet of oil or gas wells shall, prior to the issuance of building permits by the County of Los Angeles, be evaluated in accordance with the current rules and regulations of the State of California Division of Oil and Gas. (This mitigation measure replaces Specific Plan mitigation measure SP 4.21-7.)</u></p> <p><u>LV-4.21-7 In accordance with the provisions of the 2008 Los Angeles County Building Code (Title 26), Section 110.3, all buildings and structures</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>located within 1,000 feet of a landfill containing decomposable material (in this case, Chiquita Canyon Landfill) shall be provided with a landfill gas migration protection and/or control system. (This mitigation measure replaces Specific Plan mitigation measure SP 4.21-8.)</u></p>	
<p>4.22 CULTURAL/PALEONTOLOGICAL RESOURCES</p>		
<p>Phase I and II archaeological surveys of all cultural resources were undertaken within the Newhall Ranch Specific Plan, including the Landmark Village tract map site. The Phase I survey resulted in the discovery and recording of two prehistoric archaeological sites. Subsequently, Phase II archaeological studies were conducted at these sites. One site (CA-LAN-2233) was found to contain two components: a northern component containing a subsurface archaeological deposit and intact artifacts; and a southern component consisting solely of a surface scatter of stone artifacts. The northern component contains scientific information that may contribute to the reconstruction of local prehistory; therefore, development of this northern area has the potential to result in significant impacts to cultural resources. The second component represented lithic scatter that had been extensively disturbed and did not contribute to the knowledge of prehistoric pathways. The Phase II testing determined that the second site (CA-LAN-2234) did not represent an extant archaeological site. Inadvertent direct and/or indirect disturbance during construction to any sensitive cultural resource found on the project site would be considered a significant impact absent mitigation.</p> <p>A Phase I paleontologic report was prepared to determine the likelihood of encountering paleontologic resources on the project site. This report focused on a literature and records search, as well as an extensive field survey of the area proposed for development. The proposed project would occur in geologic formations with high and moderate potential for the discovery of fossil remains. Therefore, grading activities associated with the proposed project could have significant</p>	<p>SP 4.3-1 Any adverse impacts to California-LAN-2133, -2235, and the northern portion of -2233 are to be mitigated by avoidance and preservation. Should preservation of these sites be infeasible, a Phase III data recovery (salvage excavation) operation is to be completed on the sites so affected, with archaeological monitoring of grading to occur during subsequent soils removals on the site. This will serve to collect and preserve the scientific information contained therein, thereby mitigating all significant impacts to the affected cultural resource.</p> <p>SP 4.3-2 Any significant effects to California-LAN-2241 are to be mitigated through site avoidance and preservation. Should this prove infeasible, an effort is to be made to relocate, analyze, and reinter the disturbed burial at some more appropriate and environmentally secure locale within the region.</p> <p>SP 4.3-3 In the unlikely event that additional artifacts are found during grading within the development area or future roadway extensions, an archaeologist will be notified to stabilize, recover and evaluate such finds.</p> <p>SP 4.3-4 As part of an inspection testing program, a Los Angeles County Natural History Museum-approved inspector is to be on site to salvage scientifically significant fossil remains. The duration of these inspections depends on the</p>	<p>With implementation of the identified mitigation measures, the proposed project's cultural/paleontological resources impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.</p>

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<p>impacts on the region's paleontological resources absent mitigation.</p>	<p>potential for the discovery of fossils, the rate of excavation, and the abundance of fossils. Geological formations (like the Saugus Formation) with a high potential will initially require full time monitoring during grading activities. Geologic formations (like the</p>	
	<p>SP 4.3-4 (continued) Quaternary terrace deposits) with a moderate potential will initially require half-time monitoring. If fossil production is lower than expected, the duration of monitoring efforts should be reduced. Because of known presence of microvertebrates in the Saugus Formation, samples of at least 2,000 pounds of rock shall be taken from likely horizons, including localities 13, 13A, 14, and 23. These samples can be stockpiled to allow processing later to avoid delays in grading activities. The frequency of these samples will be determined based on field conditions. Should the excavations yield significant paleontological resources, excavation is to be stopped or redirected until the extent of the find is established and the resources are salvaged. Because of the long duration of the Specific Plan, a reassessment of the paleontological potential of each rock unit will be used to develop mitigation plans for subsequent subdivisions. The report shall include an itemized inventory of the fossils, pertinent geologic and stratigraphic data, field notes of the collectors and include recommendations for future monitoring efforts in those rock units. Prior to grading, an agreement shall be reached with a suitable public, non-profit scientific repository, such as the Los Angeles County Museum of Natural History or similar institution, regarding acceptance of fossil collections.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.22 CULTURAL/PALEONTOLOGICAL RESOURCES (continued)		
	<p>LV 4.22-1 Although no other significant cultural resources were observed or recorded, all grading activities and surface modifications must be confined to only those areas of absolute necessity to reduce any form of impact on unrecorded (buried) cultural resources that may exist within the confines of the project area. In the event that resources are found during construction, activity shall stop and a qualified archaeologist shall be contacted to evaluate the resources. If the find is determined to be a historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Construction work may continue on other parts of the construction site while historical/archeological mitigation takes place, pursuant to Public Resources Code Section 21083.2(i).</p> <p>LV 4.22-2 For archeological sites accidentally discovered during construction, there shall be an immediate evaluation of the find by a qualified archeologist. If the find is determined to be a historical or unique archeological resource, as defined under CEQA, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be provided. Construction work may continue on other parts of the construction site while historical/archeological mitigation takes place, pursuant to Public Resources Code Section 21083.2(i).</p> <p><u>LV 4.22-3 Scientific specimens are to become the property of a public, nonprofit educational institution, such as the Los Angeles County Museum of</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>Natural History (or similar institution). Most institutions are now requiring, as conditions for accepting the materials, that significant fossils be prepared, identified to a reasonable level, and catalogued before donation. Therefore, to meet these requirements, prior to the start of Project-related grading, an agreement shall be reached with a suitable scientific repository regarding acceptance of the fossil collection.</u></p> <p><u>LV 4.22-4 A qualified paleontologist shall be retained to monitor and salvage scientifically significant fossil remains. The duration of these inspections depends on the potential for the discovery of fossils, the rate of excavation, and the abundance of fossils.</u></p> <p><u>(a) The Saugus and Pico Formations have a high potential to yield paleontological resources and will require continuous monitoring during all grading activities. This may require use of multiple paleontologists working on the site at the same time if simultaneous ground disturbing activities are occurring over an extensive area to assure all areas of excavation are being fully monitored for the presence of paleontological resources. The number of required monitors shall be determined by Project's monitoring paleontologist.</u></p> <p><u>(b) The older dissected Pleistocene formations have a moderate potential to yield paleontological resources and will require half-time monitoring during all grading activities by a qualified paleontologist(s).</u></p> <p><u>Periodic review of the paleontological potential assigned to each rock unit shall be conducted at the end of each phase of grading. This reassessment of potential will be used to</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>develop mitigation plans for future phases of development. If fossil production is lower than expected, the duration of the monitoring efforts should be reduced to less than continuous monitoring during all grading activities.</u></p> <p>LV 4.22-5 <u>The paleontologist, in consultation with the grading contractor, developer, and Los Angeles County inspector, shall have the power to divert temporarily or direct grading efforts in the area of an exposed fossil to allow evaluation and, if necessary, salvage of exposed fossils.</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.23 CLIMATE CHANGE		
<p>The proposed Landmark Village project would result in the emission of greenhouse gases (GHGs). Section 4.23 discusses the scientific and regulatory developments surrounding global climate change and provides a quantitative inventory for the emissions that would result from approving Landmark Village. In the absence of regulatory criteria, a significance criterion also was developed to assess the impact of the project's GHG emissions. Both project and cumulative impacts were assessed against the identified significance criterion.</p> <p>Section 4.23 also discusses the Intergovernmental Panel on Climate Change's (IPCC) conclusion that there is a scientific consensus that global climate change is occurring, and that the frequency of heat extremes, heat waves, and heavy precipitation events likely will increase. Currently accepted models predict that continued GHG emissions at or above current rates will produce more extreme global climate changes during the 21st century than were observed during the 20th century. Relatedly, the section also addresses the IPCC's conclusion that human activities have increased atmospheric concentrations of GHGs.</p> <p>Nonetheless, there are uncertainties. The uncertainties relate to predicting: the actual climate change experienced by various areas of the world; the rate at which air and water temperatures will rise; whether the consequences of global climate change will be sudden or gradual; whether the consequences will be catastrophic or manageable; and whether international, national, state, and local measures will effectively reduce GHG emissions.⁹</p>	<p>LV 4.23-1 All residential buildings on the project site that are enabled by approval of the proposed project shall be designed to provide improved insulation and ducting, low E glass, high efficiency air conditioning units, and radiant barriers in attic spaces, as needed, or equivalent to ensure that all residential buildings operate at levels 15 percent better than the standards required by the <u>2008 version of Title 24 applicable at the time the building permit applications are filed. Notwithstanding this measure, all residential buildings shall be designed to comply with the then-operative Title 24 standards applicable at the time building permit applications are filed. For example, if new standards are adopted that supersede the 2008 Title 24 standards, the residential buildings shall be designed to comply with those newer standards and, if necessary, exceed those standards by an increment that is equivalent to a 15 percent exceedance of the 2008 Title 24 standards.</u></p> <p>LV 4.23-2 All commercial and public buildings on the project site that are enabled by approval of the proposed project shall be designed to provide improved insulation and ducting, low E glass, high efficiency HVAC equipment, and energy efficient lighting design with occupancy sensors, <u>as needed</u>, or equivalent to ensure that all commercial and public buildings operate at levels 15 percent better than the standards required by the <u>2008 version of Title 24 applicable at the time the building permit</u></p>	<p>With implementation of the identified mitigation measures, the proposed project's climate impacts would be mitigated to below a level of significance, and no significant unavoidable impacts would occur.</p>

⁹ Climate Action Team Report to Governor Schwarzenegger and the Legislature, California Environmental Protection Agency (March 2006) pp. 15-16. This report is available for public inspection and review at Los Angeles County Department of Regional Planning, 320 West Temple Street, Los Angeles, California 90012, and is incorporated by reference.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>applications are filed. Notwithstanding this measure, all nonresidential buildings shall be designed to comply with the then-operative Title 24 standards applicable at the time building permit applications are filed. For example, if new standards are adopted that supersede the 2008 Title 24 standards, the nonresidential buildings shall be designed to comply with those newer standards and, if necessary, exceed those standards by an increment that is equivalent to a 15 percent exceedance of the 2008 Title 24 standards.</u></p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.23 CLIMATE CHANGE (continued)		
<p>The emissions inventory for the proposed Landmark Village project considers eight categories of GHG emission sources that would result from approval of the Landmark Village project: (1) emissions due to land use/vegetation changes; (2) emissions from construction activities; (3) emissions associated with residential building use; (4) emissions associated with nonresidential building use; (5) mobile source emissions; (6) municipal source emissions; (7) area emissions; and (8) emissions associated with recreational center use. The emissions from land use/vegetation changes and construction activities are one-time emissions event, whereas emissions from the other sources would occur annually, throughout the life of the project. The inventory identified approximately 43,934 metric tons (tonnes) of carbon dioxide equivalent (CO₂e) one-time emissions, and 20,193 tonnes of CO₂e annual emissions. Of this annual amount, about 35 percent is attributable to vehicular emissions associated with residential and commercial activities, and about 57 percent is attributable to the energy use associated with residential and nonresidential buildings. If the one-time emissions are annualized, assuming a 40-year development life (which likely is low), then the one-time emissions account for approximately 1,098 tonnes (or 5 percent) of the annualized emissions. Taking the annualized one-time emissions into account, the annual emissions are 21,291 tonnes per year.</p>	<p>LV 4.23-3 The project applicant or designee shall produce or cause to be produced <u>or purchase renewable electricity, or secure greenhouse gas offsets or credits from a public agency (e.g., CARB; SCAQMD) endorsed market,</u> equivalent to the installation of one 2.0 kilowatt <u>2.0 kilowatt</u> photovoltaic (i.e., solar) power system no smaller than 2.0 kilowatts, when undertaking the design and construction of each single-family detached residential unit on the project site. that is enabled by approval of the proposed project; or, at the applicant's option, prior to commencing construction, the applicant shall secure offsets or credits for carbon dioxide equivalents from either the Climate Action Reserve of the California Climate Action Registry, the Chicago Climate Exchange, or similar reserve/exchange; or, alternatively, at the applicant's option, the applicant may pay to the South Coast Air Quality Management District (District) the equivalent amount of funds that would be due to buy credits from the Climate Action Reserve, Chicago Climate Exchange, or similar reserve/exchange for greenhouse gas emission mitigation purposes. In any case, installation of individual photovoltaic systems shall be considered when undertaking the design and construction of single family residential units on the project site.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.23 CLIMATE CHANGE (continued)		
<p>These emission levels were analyzed to determine whether approval of Landmark Village would impede compliance with the GHG emissions reduction goals mandated by the California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32), which requires that California's GHG emissions be reduced to 1990 levels by 2020. The proposed project's CO₂e emissions from all annual sources are 31.2 percent below the level that would be expected if the proposed project were constructed consistent with the assumptions in the California Air Resources Board's projections for 2020 if "no actions are taken" (CARB 2020 NAT scenario). (See Climate Change Proposed Scoping Plan: A Framework for Change (Scoping Plan), California Air Resources Board (adopted December 2008).) Moreover, when the one-time land use/vegetation change and construction emissions are included, the proposed project's emissions are still 30.1 percent below the CARB 2020 NAT scenario. As provided in the Scoping Plan, a reduction of 29 percent below the CARB 2020 NAT scenario is required to meet the goals of AB 32. Therefore, the proposed project would not impede implementation of AB 32 as its reduction below the CARB 2020 NAT scenario is greater than that required in the Scoping Plan, and project impacts are less than significant.</p>	<p>LV 4.23-4 The project applicant or designee shall produce or cause to be produced <u>or purchase</u> renewable electricity, or secure greenhouse gas offsets or credits from a public agency (e.g., CARB; SCAQMD) endorsed market, equivalent to the installation of one 2.0 kilowatt photovoltaic (i.e., solar) power system no smaller than 2.0 kilowatts, on each 1,600 square feet of nonresidential roof area provided on the project site. or, at the applicant's option, prior to commencing construction, the applicant shall secure offsets or credits for carbon dioxide equivalents from either the Climate Action Reserve of the California Climate Action Registry, the Chicago Climate Exchange, or similar reserve/exchange; or, alternatively, at the applicant's option, the applicant may pay to the South Coast Air Quality Management District (District) the equivalent amount of funds that would be due to buy credits from the Climate Action Reserve, Chicago Climate Exchange, or similar reserve/exchange for greenhouse gas emission mitigation purposes. In any case, installation of individual photovoltaic systems shall be considered when undertaking the design and construction of nonresidential buildings on the project site.</p>	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.23 CLIMATE CHANGE (continued)		
<p>This inventory was prepared assuming that all emissions from Landmark Village would be "new," in the sense that absent development of Landmark Village these emissions would not occur. Given the global nature of GHG emissions, questions arise over whether new global GHG emissions are caused by economic and population growth, and not the local development projects that simply accommodate such growth.</p> <p>In addition, the proposed Landmark Village project's GHG emissions were assessed from a cumulative impact perspective. As discussed above, AB 32 requires approximately a 29 percent reduction of GHG emissions below the CARB 2020 NAT scenario. The project design features of Landmark Village would reduce its contribution of GHG emissions; therefore, especially when compared to a project that does not adopt such reduction strategies and sustainable development principles, the proposed project would enable California to meet its goal of returning to 1990 GHG emissions levels by 2020. As a result, the Landmark Village GHG emissions are not considered "cumulatively considerable" under CEQA.</p>	<p>LV 4.23-5 Consistent with the Governor's Million Solar Roofs Plan, the project applicant or designee, acting as the seller of any single-family residence constructed as part of the development of at least 50 homes that are intended or offered for sale, shall offer a solar energy system option to all customers that enter negotiations to purchase a new production home constructed on land for which a tentative subdivision map has been deemed complete. The seller shall disclose the total installed cost of the solar energy system option, and the estimated cost savings.</p> <p>LV 4.23-6 The project applicant shall use solar water heating for all pools located at the Landmark Village recreation centers.</p> <p>LV 4.23-7 The project applicant, in accordance with Los Angeles County requirements, will design and construct the approximately 11,000 square foot fire station so as to achieve LEED silver certification.¹⁰</p>	

¹⁰ LEED certification is a performance-oriented rating system whereby building projects earn points for satisfying criterion designed to address environmental impacts inherent in the design, construction, operation and management of building

3. RESPONSIBLE AGENCIES

Under CEQA, a public agency, other than a lead agency, that has discretionary approval power over the proposed project is considered a “responsible agency” (*State CEQA Guidelines* Section 15381). No public agency, other than the County of Los Angeles, has discretionary approval power over the proposed Landmark Village project; however, if the County approves this project, subsequent implementation of various project components could require discretionary approval authority from responsible agencies including, among others:

- (a) California Department of Transportation (Caltrans);
- (b) California Regional Water Quality Control Board (RWQCB);
- (c) California Department of Fish and Game (CDFG);
- (d) California Public Utilities Commission (CPUC);
- (e) South Coast Air Quality Management District (SCAQMD);
- (f) County Sanitation Districts of Los Angeles County (CSDLAC);
- (g) U.S. Fish and Wildlife Service (USFWS); and
- (h) U.S. Army Corps of Engineers (ACOE).

This section is not intended to provide a complete and final listing of all subsequent discretionary actions or approvals that are needed, or may be needed, to implement the proposed project. This section is intended only to identify the responsible agencies, which may have subsequent discretionary approval authority over implementation of various project components in the future.

4. PROJECT APPLICANT

The applicant of the proposed project is described below:

The Newhall Land and Farming Company
23823 Valencia Boulevard
Valencia, California 91355
Contact: Alex Herrell
(661) 255-4449

5. PROJECT SUMMARY

a. Revised Project Summary

The Landmark Village Recirculated Draft EIR (January 2010) analyzed the potential environmental impacts associated with development of 1,444 dwelling units (308 single-family dwellings and 1,136 multi-family units) and 1,033,000 square feet of mixed-use/commercial development on the proposed project site.

Subsequent to recirculation of the Draft EIR, the California Department of Fish and Game (CDFG) approved the Newhall Ranch Resource Management and Development Plan/Spineflower Conservation Plan (RMDP/SCP), which includes the Landmark Village project area within its boundaries. In response to comments received on the Landmark Village Recirculated Draft EIR from CDFG, the County has directed the project applicant (Newhall) to submit a revised Vesting Tentative Tract Map (VTTM) that, among other design features, reflects an additional riparian buffer, or setback, that would reduce impacts to sensitive riparian resources within CDFG's jurisdiction. Specific to CDFG's comments, the proposed setback occurs along both the west bank of Castaic Creek between SR-126 and the confluence of Castaic Creek and the Santa Clara River, and along the northern and southern banks of the Santa Clara River. The total number of residential dwelling units would remain unchanged at 1,444 units and the amount of mixed-use/commercial space would remain 1,033,000 square feet. Within the residential project component, however, the number of single-family units would decrease from 308 to 270 units (a reduction of 38 units), the number of multi-family units would increase from 1,080 to 1,105 units (an increase of 25 units), and the number of mixed-use/multi-family units would increase from 56 to 69 units (an increase of 13 units). The size of the development footprint on the revised VTTM site would decrease by 16.7 acres.

The County also has asked that the applicant address the potential significant impacts on the environment of constructing and operating interim chloride reduction facilities to further treat Newhall Ranch project wastewater on an interim basis at the Valencia Water Reclamation Plant (WRP), if needed. In response to the County's directive, the applicant has refined the proposed project to accommodate both the revised VTTM and the interim chloride reduction facilities. These refinements, if approved by the County, would comprise the "revised project." With the exception of the water quality analysis, this section, nor any other section, has not been revised to reflect the revised project. Instead, the environmental effects of the proposed revised project are addressed in **New Topical Response 12: Revised Project Design.**

b. Revised Draft EIR Project Summary

The Newhall Ranch Specific Plan was adopted by the Los Angeles County Board of Supervisors on May 27, 2003. The approved Specific Plan will guide the long-term development of the 11,999-acre Newhall Ranch community,¹ located in northern Los Angeles County, comprising a broad range of residential, mixed-use, and commercial land uses within five village areas.

The Specific Plan sets forth a comprehensive set of plans, development regulations, design guidelines, and implementation programs to develop the Specific Plan site, consistent with the goals, objectives, and policies of the Los Angeles County General Plan and Santa Clarita Valley Area Plan, as amended by General Plan Amendment No. 94-087-(5) (approved May 27, 2003). The Specific Plan has been developed so that all subsequent development plans and subdivision maps associated with Newhall Ranch would be consistent with both the Los Angeles County General Plan and Santa Clarita Valley Area Plan. The Specific Plan also includes the Newhall Ranch WRP at the western edge of the Specific Plan area. Individual projects, such as residential, mixed-use, commercial, and non-residential developments, roadways, public facilities, and amenities would be developed over time in accordance with the approved Specific Plan.

The Land Use Plan (see, Specific Plan, Exhibit 2.3-1) provides the framework for the approved development within the Specific Plan site. The approved Land Use Plan describes the land use designations that include Residential (five types), Mixed-Use, Commercial, Business Park, Visitor-Serving, Open Area, the two River Corridor and High Country Special Management Areas/Significant Ecological Areas (SMA/SEA), and a Spineflower Conservation Overlay Easement area, all linked by a comprehensive system of roadways, trails, and paseos. Land use overlays are included on the approved Land Use Plan to show approximate locations of public facilities such as parks, schools, library, golf course, fire stations, and the Newhall Ranch WRP. Further information regarding the approved Specific Plan is provided below.

The proposed Landmark Village project is the first phase of implementing the approved Specific Plan. Specifically, the project applicant proposes to develop the 292.6-acre Landmark Village tract map site, located in the Riverwood Village within the boundary of the approved Specific Plan. To facilitate development of the Landmark Village tract map site (VTTM 53108), several off-site project-related components would be developed on an additional 770.8 acres of off-site land that, for the most part, is

¹ The total acreage shown in the adopted Specific Plan (May 2003) is 11,963 acres. Since approval of the Specific Plan in May 2003, more recent project-specific information has been developed, which shows that the total gross acres of the Specific Plan area is approximately 11,999 acres.

within the approved Specific Plan boundary (**Figure 1.0-3, Project Boundary/Environmental Setting**, shown later in this section).² These project-related components include the following:

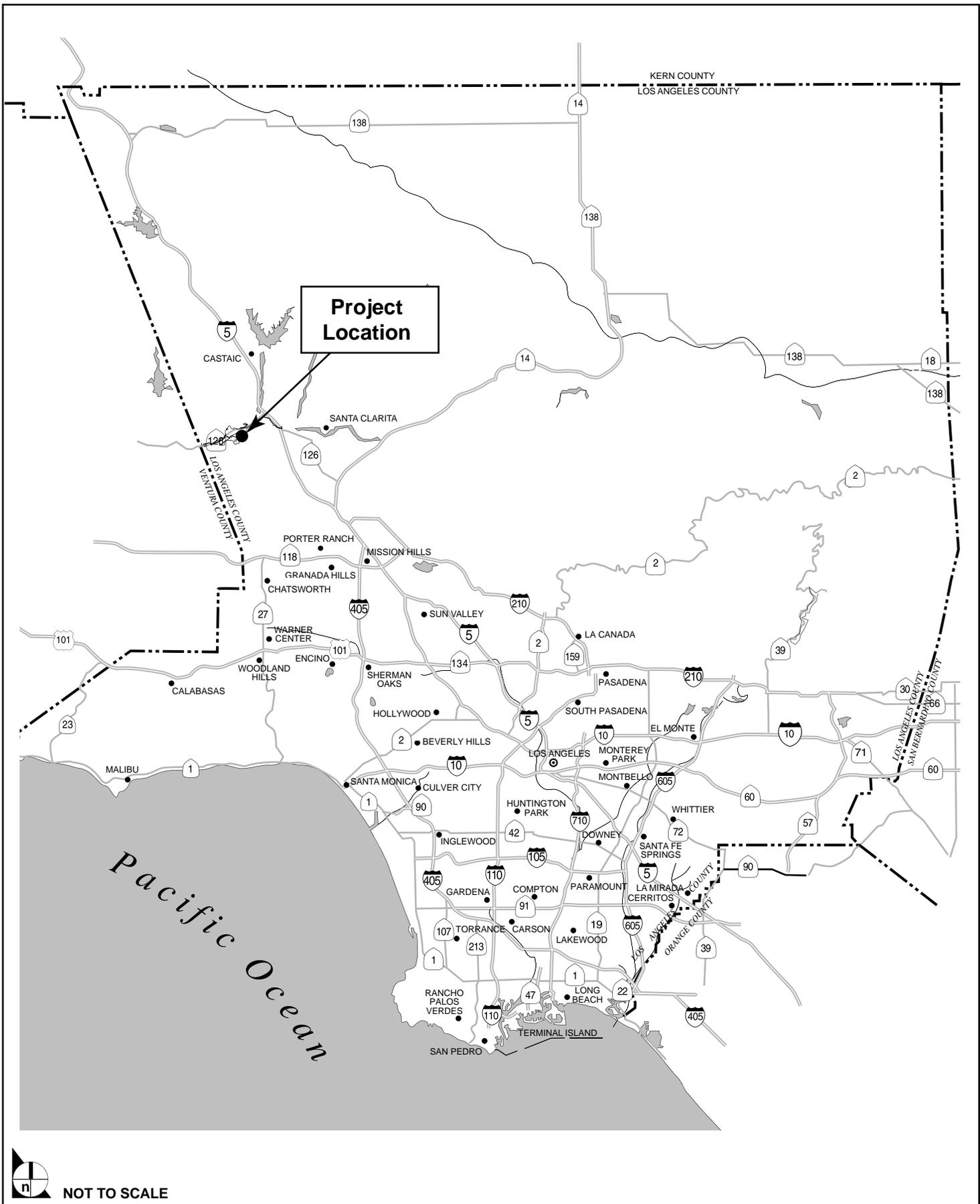
- A cut and fill grading operation, which includes fill imported to the tract map site from a 181-acre borrow site (and related haul routes), located south of the Santa Clara River (the Adobe Canyon borrow site); grading to accommodate roadway improvements to State Route 126 (SR-126); grading the utility corridor area, which runs parallel to SR-126; and constructing four debris basins for stormwater flows collected by the tract map's storm drainage system on approximately 120 acres of land, located directly north of SR-126 and east and west of Chiquito Canyon (Chiquito Canyon grading site);
- 227-acre utility corridor, which would run parallel to SR-126, from the western boundary of the tract map site to the approved Newhall Ranch WRP near the Los Angeles County/Ventura County line, from the eastern boundary of the tract map site to the Old Road/Interstate 5 (I-5), and then south to Round Mountain, which would extend municipal services to and from the tract map site;
- Potable water tank;
- Conversion of an existing potable water tank to a recycled water tank; and
- Construction of the Long Canyon Road Bridge, bank stabilization, and storm drainage improvements.

For purposes of this EIR, the "tract map site" refers to the proposed location of the Landmark Village development site itself, and the "project site" generally includes the tract map site, and the Adobe Canyon borrow site, the Chiquito Canyon grading site with debris basins, the utility corridor, the water tank site, the Long Canyon Road Bridge, bank stabilization, drainage improvements and related haul routes. The entire project site comprises approximately 1,063.4 gross acres.

The land uses proposed as part of the Landmark tract map site are consistent with the approved Specific Plan. The Specific Plan's approved Land Use Plan designates the Landmark Village tract map site for single- and multi-family residential, mixed-use, and commercial land uses.³ The Landmark Village tract map site proposes construction of 1,444 residential dwelling units (308 single-family units, 1,136 multi-family units), up to 1,033,000 square feet of mixed-use/commercial uses, a 9-acre elementary school, a 16-acre Community Park, a fire station, public and private recreational facilities, trails, trailhead, park and ride, and road improvements (**Table 1.0-3, Landmark Village Statistical Summary**, shown later in this section).

² Portions of the proposed utility corridor, Chiquito Canyon grading site, and the proposed potable water tank site (located within the Valencia Commerce Center business park), and the proposed reclaimed water tank (built and located on Round Mountain directly east of Interstate 5) are outside the boundary of the Newhall Ranch Specific Plan, as shown in the RDEIR, Section 1.0, Project Description, Figure 1.0-3.

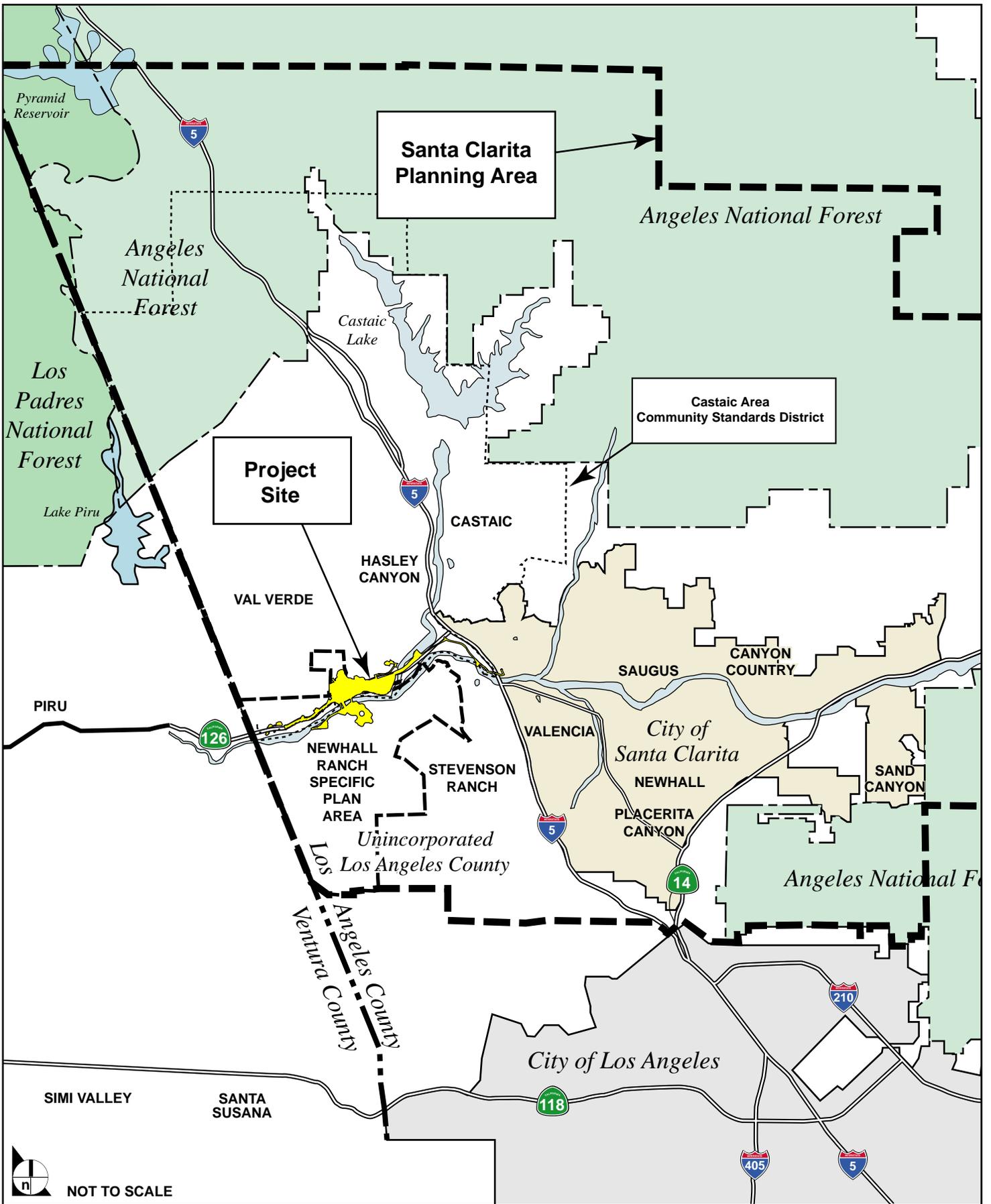
³ See, Newhall Ranch Specific Plan (May 2003), Exhibit 2.3-1, Land Use Plan, Table 2.3-1, Specific Plan Overall Land Use Plan Statistical Table, and Exhibit 2.3-2, Village Plan (**Appendix 1.0**).



SOURCE: Impact Sciences, Inc. – May 2006

(Revised) FIGURE 1.0-1

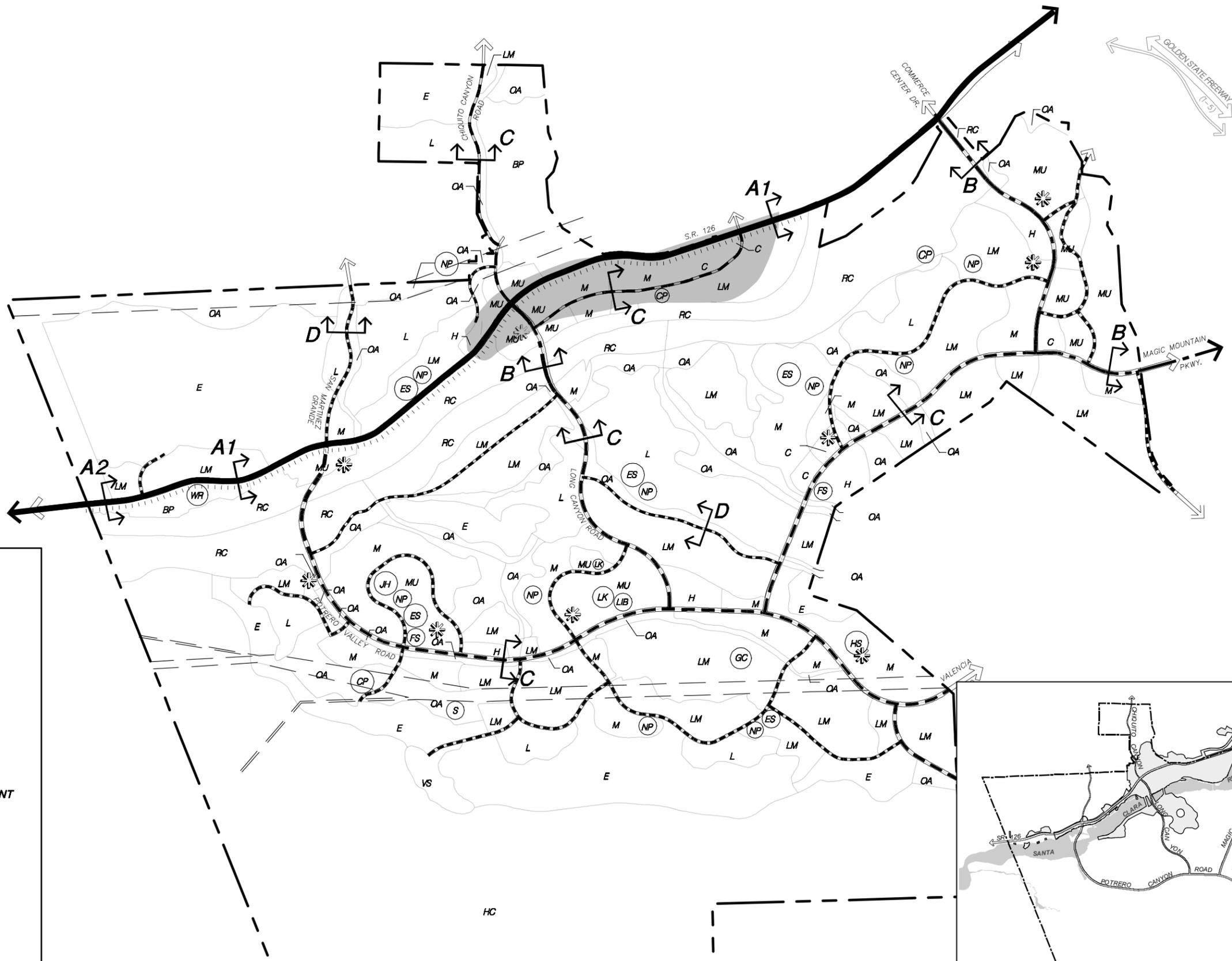
Regional Location



SOURCE: Impact Sciences, Inc. – September 2008

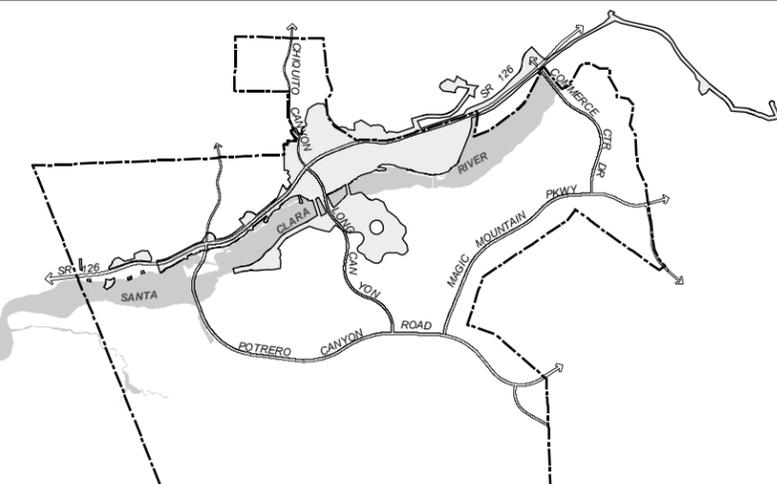
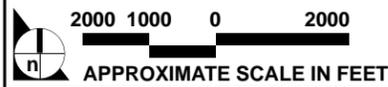
(Revised) FIGURE 1.0-2

Vicinity Map



Legend:

-  STATE HIGHWAY
-  MAJOR HIGHWAY
-  SECONDARY HIGHWAY
-  COLLECTOR
-  POSSIBLE FUTURE COLLECTOR ALIGNMENT
-  BUS PULL-IN
-  LANDMARK VILLAGE



SOURCE: FORMA – May 2003

(Revised) FIGURE 1.0-8

Existing Secondary Highway Designation– Master Circulation Plan of Newhall Ranch Specific Plan

- (f) **Oak Tree Permit.** The County Zoning Code contains provisions protecting trees of the oak genus. As a result, the removal or damage of certain “protected” oak trees is unlawful without a permit (Los Angeles County Zoning Code, Section 22.56.2050). An Oak Tree Permit is required for the removal of 73 of the 200 oak trees located on the project site, which includes the Landmark Village Vesting Tentative Tract Map No. 53108, all proposed grading limits (including access roads and infrastructure), and the area within 200 feet of the grading line. Up to 36 of these oak trees proposed for removal would be transplanted within the Newhall Ranch Specific Plan site. A final evaluation of these trees proposed for transplanting would be completed prior to implementing the transplanting operation. In addition, 14 oak trees would be impacted by encroachment (e.g., grading, excavation) within the protective zone of those trees. The proposed project does not impact the remaining 113 oak trees identified on the project site.
- (g) **Off-Site Materials Transport Approval.** Section 5.2 of the Newhall Ranch Specific Plan governs off-site transport of soil materials in conjunction with permitted grading projects. The Specific Plan allows the Planning Director, or Director of Public Works, to approve applications for the off-site transport of materials over 10,000 cubic yards within the boundaries of the Specific Plan. The application must include a map that depicts the location and nature of the grading activity, the ultimate use of the property, along with the haul route used to deliver the material to the final destination.

The Landmark Village project would require off-site grading and materials transport of up to 7 million cubic yards (mcy) of fill to construct the tract map site and the other related project components (i.e., debris basins, water/wastewater facilities, and the utility corridor). The approximately 7 mcy would be from the Adobe Canyon borrow site and the Chiquito Canyon grading site. Of the 7 mcy, the Landmark Village project will-would import up to 5.8 million cubic yards of fill-material from the Adobe Canyon borrow site. The fill is needed to elevate the proposed finished pads on the Landmark Village tract map site to a minimum of 1 foot above the Santa Clara River flood surface water elevation in accordance with the requirements of the Los Angeles County Department of Public Works Flood Control Division. Average fill heights will be approximately 10 feet; however, some areas will require approximately 20 feet of fill. ~~The applicant proposes to use the Adobe Canyon area within the approved Specific Plan as the borrow site.~~

In addition, limited movement of the remaining off-site grading and materials transport (1.2 mcy) would be from the Chiquito Canyon grading site. Specifically, soil located north of SR-126 in Chiquito Canyon will-would be transported to the tentative tract map site from the construction of debris basins required for the drainage system. Additionally, soils located north of SR-126 in Chiquito Canyon would will be used for construction purposes associated with the of water/wastewater treatment plant facilities, widening of SR-126, and the utility corridor. The movement of soils for the purposes of debris basins, water/wastewater treatment plant facilities, and

utility corridor construction ~~has been~~ is included in the ~~5.8-7 mcy million cubic yards~~ of fill ~~(approximately 5.8 mcy from Adobe Canyon and about 1.2 mcy from Chiquito Canyon).~~ material. These improvements would be connected to the Landmark Village tract map site by utility lines in the utility corridor.

- (h) **Conditional Use Permit.** Grading of hillsides occurring in the Adobe Canyon borrow site meets the definition of a grading project under Section 22.08.070 of the Los Angeles County Planning and Zoning Code; and therefore, a CUP is required. In addition, the CUP is necessary to allow for the construction of the project water tank.
- (i) **Modification to County Floodway.** The Los Angeles County Department of Public Works has developed a comprehensive system of flood-control facilities to collect and convey flows. The design of the system is based on a theoretical storm that is derived from a 50-year frequency rainfall event and includes a number of assumptions on the state of the watershed. This design event is used to predict flood patterns along the Santa Clara River.

Development of the Landmark Village project would elevate the tract map site resulting in the removal of approximately 169 acres of land from the Capital Floodplain. This action requires an adjustment to the County Floodway Boundary to account for changes to the floodplain boundary as a result of flood protection improvements for the project. The flood plain boundary is depicted in **Figure 4.2-2, Existing County Capital Flood Plain Boundaries.**

9. OTHER PERMITS AND APPROVALS

Table 1.0-2, Future Agency Actions, identifies other permits and approvals, which are known to be needed, or may be needed, in order to implement various project components in the future.

**Table 1.0-2
Future Agency Actions¹**

Agency	Action Required
<ul style="list-style-type: none"> Regional Water Quality Control Board 	<u>Section 401 certification of USACE Section 404 permit or, alternatively, waste discharge requirements (WDRs); construction de-watering permits; Newhall Ranch Specific Plan Sub-Regional Stormwater Mitigation Plan–Pollutant Discharge Elimination System Permit; and Section 401 permit under the federal Clean Water Act⁴</u>
<ul style="list-style-type: none"> California Department of Fish and Game 	Streambed Alteration Agreement per Fish & Game Code Section 1602 Incidental Take Permits authorizing impacts to listed species under Section 2081 of the Fish & Game Code ²
<ul style="list-style-type: none"> United States Department of the Army, Corps of Engineers 	Section 404 Permit under the federal Clean Water Act ³
<ul style="list-style-type: none"> South Coast Air Quality Management District 	Various permits for air emissions regulation found in the Air Quality Management Plan
<ul style="list-style-type: none"> <u>United States Department of the Interior, Fish and Wildlife Service (FWS)</u> 	<u>Candidate Conservation Agreement to be made part of the Spineflower Conservation Plan⁵</u>
<ul style="list-style-type: none"> <u>California Public Utilities Commission</u> 	<u>Approval of an Advise Letter to allow Valencia Water Company to provide water to the project site; Approval of a new Southern California Edison Company substation</u>
<ul style="list-style-type: none"> <u>California Department of Transportation</u> 	<u>Execution of the Traffic Mitigation Agreement with the project applicant</u>
<ul style="list-style-type: none"> <u>County Sanitation Districts of Los Angeles County (CSDLAC);</u> 	<u>Implementation of the Interconnection Agreement if Landmark Village wastewater is temporarily treated at the Valencia Water Reclamation Plant</u>

¹ This table is not intended to provide the complete and final listing of future actions required to implement the project. This is an attempt to identify those actions that are known at this time to be required in the future.

² The Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan EIS/EIR also will provide environmental review required by CDFG for its consideration of requested permits.

³ The Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan EIS/EIR also will provide environmental review required by ACOE for its consideration of requested permits.

⁴ The Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan EIS/EIR also will provide environmental review required by the RWQCB for its consideration of requested permits.

⁵ The Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan EIS/EIR also provided environmental review required by the FWS for its consideration of requested permits.

10. NEWHALL RANCH SPECIFIC PLAN IMPLEMENTATION PROCESS

The northern Los Angeles County region has experienced and continues to experience significant growth resulting in a high demand for housing and jobs, and the overall regional need for large-scale residential, nonresidential, and commercial development to accommodate approved and planned growth in the region. To facilitate the orderly accommodation of the demand for housing and jobs, the Specific Plan was approved by the Los Angeles County Board of Supervisors on May 27, 2003.

The County has determined that buildout of the Specific Plan will foster regional economic development and job creation by providing 20,885 homes, including affordable housing, and approximately 20,000 jobs. In addition, the County has required the applicant to set aside a significant 1,014 acres of open space area (including 181 acres of Community Parks and 833 acres in other open spaces) for the benefit of its residents and the region. These open space areas are located in and adjacent to the Specific Plan area, and include the River Corridor SMA/SEA 23, High Country SMA/SEA 20, Salt Creek area, designated Open Areas, spineflower preserve areas, and oak resources.

The plans for these open space areas, and associated development requiring federal and state permits, are currently under evaluation in the applicant's Newhall Ranch Resource Management and Development Plan (RMDP) and Spineflower Conservation Plan (SCP). The proposed RMDP/SCP Project ~~is being~~ has been evaluated by ACOE and CDFG, as lead agencies, in a joint Environmental Impact Statement/Environmental Impact Report (EIS/EIR). The status of the EIS/EIR for the RMDP/SCP Project was provided in **Topical Response 2** of the Landmark Village Final EIR (Vol. I, November 2007).¹⁰ In addition, the Landmark Village Draft EIR (**Section 4.4**, pp. 4.4-135-147) correctly listed the RMDP/SCP Project as one of 22 projects with related or cumulative impacts. Because the applicant is the same for both the Landmark Village project and the RMDP/SCP Project, additional updated information concerning the RMDP/SCP Project is provided below.

a. Resource Management and Development Plan (~~RMDP~~) and Spineflower Conservation Plan (~~SCP~~) Project Update

The applicant ~~is currently processing~~ has processed federal and state permit applications and a joint EIS/EIR under both the National Environmental Policy Act (NEPA) and CEQA to assess the environmental implications of implementing the proposed RMDP/SCP Project. The RMDP/SCP Project encompasses the Newhall Ranch Specific Plan area and two planning areas in the Specific Plan's immediate vicinity, the Valencia Commerce Center (VCC) and Entrada.

The Specific Plan has been summarized in detail above. The VCC planning area comprises the applicant's VCC property, consisting of a largely constructed commercial/industrial complex located northeast of the Specific Plan and north of SR-126. The SCP component of the proposed RMDP/SCP Project, if approved, would facilitate development in the remaining undeveloped portion of the VCC commercial/industrial complex. The Entrada planning area is located immediately southeast of the Specific Plan area. The applicant is seeking approval from Los Angeles County for planned residential

¹⁰ The Landmark Village Final EIR, **Topical Response 2**, referred to an "EIS/EIR Project," which is the same as the RMDP/SCP Project.

and nonresidential development within the Entrada planning area. The SCP component of the proposed RMDP/SCP Project would designate an area within Entrada as a spineflower preserve. If approved, the SCP component would include take authorization of spineflower populations in the Entrada planning area that are located outside of the designated spineflower preserve. Thus, planned development within a portion of the Entrada planning area would be facilitated by approval of the SCP component of the proposed RMDP/SCP Project.

Since public availability of both the Landmark Village Draft EIR (November 2006) and the Final EIR (November 2007), additional updated information can be provided concerning the ~~proposed~~-RMDP/SCP Project and associated joint EIS/EIR. The update is provided below.

The ACOE and CDFG are the joint lead agencies responsible for the ~~proposed~~-RMDP/SCP Project and associated environmental document. The applicant and landowner is The Newhall Land and Farming Company (Newhall Land or applicant). The applicant ~~is requesting~~ has requested federal and state permits, agreements, and authorizations from ACOE, CDFG, and other agencies to implement the ~~proposed~~-RMDP/SCP Project.

The ~~proposed~~-RMDP/SCP Project consists of two components. The first is the ~~proposed~~-RMDP, which is a conservation, mitigation, and permitting plan for sensitive biological resources within the previously approved Newhall Ranch Specific Plan area, and it would be relied upon to obtain federal and state permits to implement infrastructure improvements required to facilitate buildout of the approved Specific Plan. The RMDP is intended to direct both resource management and development on the Specific Plan site. The second component is the SCP, which is a conservation and management plan to permanently protect and manage a system of preserves designed to maximize the long-term persistence of the San Fernando Valley spineflower (*Chorizanthe parryi* ssp. *fernandina*; spineflower or SFVS), a federal candidate and a state-listed endangered plant species. The SCP would address known spineflower populations located within the Specific Plan area and the two planning areas, the VCC and a portion of the Entrada planning areas.

(1) Resource Management Development Plan Component

As stated, the RMDP component is a conservation, mitigation, and permitting plan for the long-term management of sensitive biological resources in conjunction with infrastructure improvements within the 11,999-acre Specific Plan area, and limited areas outside of the Specific Plan area as they relate to the RMDP/SCP Project. Subsequent Specific Plan development plans, subdivision maps, and federal and state permitting were anticipated to be required to facilitate buildout of the Specific Plan.

The resource management portion of the RMDP would guide future resource conservation, mitigation, and permitting needed for the long-term management of sensitive biological resources within the Specific Plan. The development plan portion of the RMDP consists of physical infrastructure located in the Santa Clara River and its tributaries that are required to facilitate the approved Specific Plan.

The RMDP infrastructure is comprised of bridges and road crossing culverts, bank stabilization, drainage facilities, water quality control facilities, tributary drainage modifications, buried storm drain installation, utility corridor construction, temporary haul routes for grading, the Newhall Ranch WRP outfall pipeline, roadway improvements to SR-126, maintenance activities, recreation facilities, geotechnical investigation activities, and habitat enhancement and restoration activities. The ~~proposed~~ infrastructure, facilities, and associated maintenance activities require federal and state permits, consultations, and agreements from ACOE, USFWS, CDFG, and other agencies. These ~~proposed~~ activities require such permitting because they would affect waters, riverbeds, or banks within the jurisdictional limits of the ACOE and CDFG, or would potentially affect listed or threatened species, thereby requiring USFWS and/or CDFG approvals. The RMDP also would include various measures necessary under CEQA to mitigate to the extent feasible significant environmental impacts resulting from the RMDP/SCP Project, including impacts that fall within CDFG's charge as a trustee agency for fish and wildlife resources in California.

The RMDP is intended to build on the Resource Management Plan found in Section 2.6 of the approved Specific Plan. The Resource Management Plan was originally approved by the County Board of Supervisors on May 27, 2003, as part of the Board's adoption of the Specific Plan. The adopted Resource Management Plan set forth mitigation and management standards for sensitive biological resources located within the boundary of the approved Specific Plan. It also established standards governing public access, recreational use, management, and ownership of the Newhall Ranch River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the designated Open Areas within the Specific Plan area.

In addition, the previously approved Resource Management Plan created opportunities to establish "mitigation banks" within the Specific Plan boundary, provided guidance on the manner in which transitions between development areas and the SMAs and Open Areas would be managed, including the provision for wildfire fuel modification zones, and established a special study mitigation overlay and preserve program for the spineflower.

The Resource Management Plan was prepared at a programmatic level of detail, acknowledging that conservation, mitigation, and permitting activities within the Specific Plan would be subject to future federal and state permits, consultations, and agreements with ACOE, USFWS, CDFG and other agencies. Therefore, the Resource Management Plan was the initial framework for resource management within the

Specific Plan area; it was intended to be supplemented through more detailed future plans, permits, and agreements required by federal and state law.

The RMDP would guide future resource conservation, mitigation, and permitting for the long-term management of sensitive biological resources in conjunction with the proposed infrastructure and facilities required to implement the approved Specific Plan. The planning documents and ~~Draft joint~~ EIS/EIR (SCH No. 2000011025)¹¹ were made available for public review on April 27, 2009. ~~ACOE and CDFG are currently evaluating the comments received on the Draft EIS/EIR. There is no firm release date at this time with respect to the Final EIS/EIR. Please refer to the Landmark Village Final EIR, **Updated Topical Response 2: Newhall Ranch RMDP/SCP Project And Associated EIS/EIR** for an update with respect to the RMDP/SCP Project and EIS/EIR.~~

(2) Spineflower Conservation Plan Component

As stated, the second component of the RMDP/SCP Project is the SCP. The ~~proposed~~ SCP is a conservation and management plan to permanently protect and manage a system of preserves designed to maximize the long-term persistence of the spineflower. The SCP encompasses the Specific Plan area, the VCC planning area, and a portion of the Entrada planning area. The SCP is intended as a comprehensive conservation planning and preserve design plan for all of the applicant's land holdings in Los Angeles County that contain known spineflower populations. The SCP describes a preserve system proposed by the applicant. The management and monitoring components of the ~~proposed~~ SCP have been developed in consultation with CDFG.

The applicant intends to rely on the SCP to obtain federal and state permits, agreements, and authorizations from USFWS and CDFG to protect and manage spineflower preserves, and authorize take of spineflower in areas located outside of the designated preserve system. The SCP, if approved, would facilitate development within the Specific Plan, VCC, and a portion of the Entrada planning area.

¹¹ See Draft and Final EIS/EIR and associated appendices for the RMDP/SCP Project, available online at www.dfg.ca.gov/regions/5/newhall (last visited ~~November 19, 2009~~ October 5, 2010). ~~This report~~ The Draft and Final EIS/EIR also are ~~is~~ available for public inspection and review in the offices of the lead agencies: (a) ACOE, Ventura Field Office, 2151 Alessandro Drive, Suite 110, Ventura, California 93001; and (b) CDFG, 4949 Viewridge Avenue, San Diego, California 92123. ~~A copy of~~ The Draft and Final EIS/EIR and associated appendices also ~~is~~ are available for public review at the following additional locations: (c) Valencia Library, 23743 West Valencia Boulevard, Santa Clarita, California 91355; (d) Sylmar Library, 14561 Polk Street, Sylmar, California 91342; (e) Ventura H.P. Wright Library, 57 Day Road, Ventura, California 93003; (f) Castaic Library, 27971 Sloan Canyon Road, Castaic, California 91384; and (g) CDFG, Los Alamitos Office, 4665 Lampson Avenue, Los Alamitos, California 90702.

The SCP sets forth biological goals and objectives as cornerstones of the adaptive spineflower management program. Three main goals for the spineflower preserves are presented in the SCP. The goals describe the desired conditions of the spineflower populations; the communities in which the spineflower occurs, and the ecosystem processes known or hypothesized to maintain the spineflower populations and associated communities. For each goal, the SCP describes a set of objectives for attaining the goals, along with a brief explanation or rationale for each objective. The Draft SCP (June 2007) was provided in Appendix A of the Landmark Village Final EIR (November 2007).

(3) Summary of Regulatory Permitting Process for the RMDP/SCP Project

This section summarizes the federal and state regulatory framework and permitting process for the proposed RMDP/SCP Project. Please refer to the Landmark Village Final EIR, Updated Topical Response 2: Newhall Ranch RMDP/SCP Project And Associated EIS/EIR for an update with respect to the RMDP/SCP Project and EIS/EIR.

The federal action requested from ACOE consists of the issuance of a long-term, individual Section 404 Permit for the RMDP facilities and infrastructure associated with the Specific Plan that would potentially result in discharge of dredged or fill material in the Santa Clara River and its tributaries, which are considered "waters" of the United States pursuant to the Clean Water Act (33 U.S.C. Sections 1251 through 1387). Prior to issuance of a final permit, the applicant also would be required to obtain a water quality certification under section 401 of the Clean Water Act from the Los Angeles Regional Water Quality Control Board (RWQCB). As part of the federal permit review process, ACOE must comply with section 7 of the ESA, which requires an endangered species consultation with the USFWS and the National Oceanic and Atmospheric Administration Fisheries Service for any permit that may affect an ESA-listed species. Formal consultation between ACOE and USFWS has been initiated and will be completed prior to issuance of a Record of Decision for the Section 404 Permit application.

The other federal action analyzed in the joint EIS/EIR is the applicant's request to enter into a Candidate Conservation Agreement (CCA) with USFWS, consistent with the ESA, in order to memorialize agreed upon spineflower conservation, management, and monitoring measures (conservation measures) set forth in both the Agreement and the SCP. The CCA is intended to benefit the spineflower, a federal candidate species, by obtaining the applicant's commitment to implement specified conservation measures, which, when combined with benefits that would be achieved by conservation of the spineflower in Ventura County, would preclude the need to list the spineflower at the federal level. The proposed draft CCA was provided in Appendix A of the Landmark Village Final EIR (November 2007).

Authorizations required from the RWQCB include: (1) Section 401 certification of ACOE's Section 404 Permit (or Waste Discharge Requirements (WDRs) issued *in lieu* of certification), which would certify that the Section 404 Permit will comply with state water quality requirements; and (2) dewatering permit(s) (or use of the general dewatering permit) for construction dewatering needs; The RWQCB has approved the ~~and (3) approval of the~~ Newhall Ranch Specific Plan Sub-Regional Stormwater Mitigation Plan (Geosyntec, 2008). This Plan sets forth the urban runoff management program that would be implemented within the Specific Plan subregion, and is consistent with the Los Angeles County Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) Permit and the Standard Urban Stormwater Mitigation Plan (SUSMP). Stormwater management, including planning for water quality and hydromodification control, is important to assuring the long-term viability of beneficial uses, including habitat systems and species dependent on those systems. The Plan assesses potential water quality and hydromodification impacts associated with Specific Plan development, and proposes control measures to address such impacts.

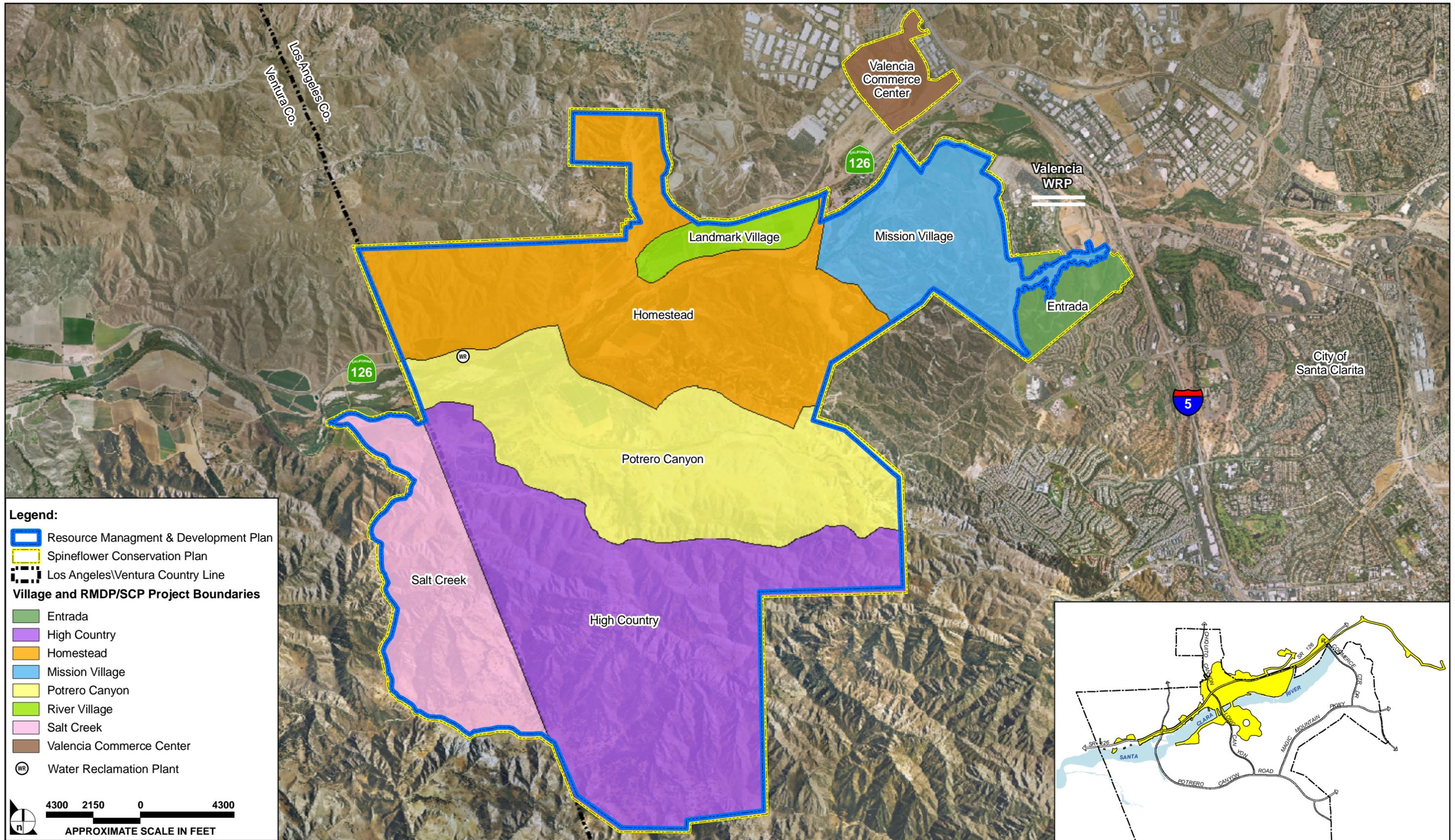
(4) RMDP/SCP Project and Joint EIS/EIR Status and Timing

The primary planning documents, the RMDP and SCP, and the joint EIS/EIR for the RMDP/SCP Project, are ~~not yet completed. The planning documents and Draft EIS/EIR were made available for public review on April 27, 2009; however, there is no firm release date at this time with respect to the Final EIR.~~ Please refer to the Landmark Village Final EIR, Updated Topical Response 2: Newhall Ranch RMDP/SCP Project And Associated EIS/EIR for an update with respect to the RMDP/SCP Project and EIS/EIR.

(5) Implementation Status of the Specific Plan Development Projects

Individual Newhall Ranch projects will be developed over time in accordance with the approved Specific Plan. The applicant is currently processing development applications and local project-level environmental documentation to implement projects within the Specific Plan. The status of each of these other Newhall Ranch Specific Plan projects is summarized below, and those projects are illustrated in Figure 1.0-9a, as they relate to the RMDP/SCP Project.

Mission Village (VTM 61105). The Mission Village project is proposed on the approximately ~~1,252~~ 1,262-acre tract map site located within the northeastern portion of the approved Specific Plan. Proposed development on the tract map site includes ~~5,331~~ 4,412 residences (~~291~~ 382 single-family homes, and ~~5,040~~ 4,030 multi-family units, including attached and detached condominiums, age-qualified units, and apartment units), approximately ~~1.3~~ 1.5 million square feet of commercial/mixed-uses, elementary school, fire station, public library, parks, public and private recreational facilities, trails, and road improvements. Other land uses within the tract map site include a spineflower preserve in the northeastern portion of the Mission Village site.



SOURCE: PACE - 2008

(Revised) FIGURE 1.0-9a

Specific Plan Villages within the RMDP/SCP Project

Additional facilities and infrastructure proposed on the tract map site include roads (including the Commerce Center Drive Bridge and southerly abutment), trails, drainage improvements, flood protection (including buried bank stabilization within and adjacent to the Santa Clara River), potable and reclaimed water systems, a sanitary sewer system, and dry utility systems. To facilitate development and operation of the Mission Village tract map, several components would be implemented on portions of the Project area outside of the Mission Village tract map site. These components include:

- A utility corridor along ~~the south side of~~ SR-126 extending generally from the existing Valencia WRP on the east to the approved Newhall Ranch WRP on the west, which would serve to extend municipal services to and from the tract map site.
- ~~To provide access to~~ The westerly extension of Magic Mountain Parkway and Westridge Parkway, the two roadways would be extended to the east and south, respectively, of from its existing terminus just east of the tract map boundary into the tract map site to provide a westward thoroughfare.
- Two water tanks (reclaimed and potable) that would be constructed on a single site, a portion of which lies to the south of the tract map boundary.
- A Southern California Edison electrical substation. ~~A fire station would be constructed just east of the Mission Village tract map site and north of the Magic Mountain Parkway extension (Entrada SCP planning area).~~
- A water quality basin would be constructed northeast of the proposed project on 12.5 acres of land (9.5 acres off-site and 3 acres within the tract map site). A small portion of the water quality basin and a portion of the access road to the site are located within the tract map site.

The project applicant is requesting approval of the following discretionary entitlements to allow for construction of the proposed Mission Village project site: (a) Vesting Tentative Tract Map No. 061105; (b) SEA CUP No. RCUP200500080 for project-level development, including utilities within the Specific Plan's River Corridor SMA/SEA 23 boundaries; (c) CUP No. RCUP200500081 for grading associated with the extension of Westridge Parkway and Commerce Center Drive, and the construction of off-site improvements, including ~~extension of Westridge Parkway,~~ extension of Magic Mountain Parkway, utility corridor, ~~fire station,~~ water quality basin, electrical substation, and to authorize 73 secondary units and off-site water tanks with grading associated with the tank locations; (d) Oak Tree Permit No. ROAK200500032 (project site); (e) Oak Tree Permit No. 200500043 (off-site extension of Magic Mountain Parkway); and (f) Substantial conformance determinations pertaining to Grading Hillside Management Guidelines, setback standards, off-site, reciprocal and shared parking, and proposed trails sections. Additional ministerial actions, such as grading permits, building plan review and building permits, would be required by Los Angeles County prior to actual grading and construction of the proposed Mission Village project site.

The NOP of the EIR for the Mission Village project was issued by Los Angeles County in June 2005. The Mission Village Draft EIR is expected to be released for public review in 2010.

Newhall Ranch WRP. The applicant is currently processing plans with the County Sanitation Districts of Los Angeles County for construction of the approved Newhall Ranch WRP, which would provide wastewater treatment, disposal, and reclamation of treated water for reuse within the Specific Plan, consistent with the timing as outlined in the Newhall Ranch Specific Plan ~~Wastewater Treatment Plant~~ WRP mitigation measures. The approved WRP would be constructed in one of the Specific Plan business parks, near the western edge of the Specific Plan area, along the south side of SR-126. The WRP is to be constructed in stages, as the Specific Plan is developed, and would ultimately be capable of treating up to 6.8 mgd of wastewater. The WRP is to be designed and operated to provide tertiary treatment would a near zero-discharge system, which means that the system would reclaim all treated wastewater for re-use within the Specific Plan for irrigation purposes, except for potentially wet winters when irrigation demands would be lower, requiring the discharge of unused reclaimed water to the Santa Clara River during periods of high river flow. As stated above, since approval of the Specific Plan by Los Angeles County, the LAFCO completed formation of the Newhall Ranch County Sanitation District. The new County sanitation district was formed effective July 27, 2006.

In addition, on September 6, 2007, the Regional Water Quality Control Board, Los Angeles Region, approved Order No. R4-2007-0046, NPDES Permit No. CA0064556, effective October 27, 2007. This Order serves as the NPDES Permit for point source discharges from the Newhall Ranch WRP, pursuant to section 402 of the federal Clean Water Act and chapter 5.5, division 7 of the California Water Code. The Order also serves as the Waste Discharge Requirements for the new County Sanitation District with respect to discharges to the Santa Clara River, pursuant to article 4, chapter 4, of the California Water Code. Specifically, the Order specifies limitations and discharge requirements for the Newhall Ranch WRP, including discharge prohibitions, technology-based and water quality-based effluent limitations, receiving water limitations, and other provisions such as monitoring and reporting requirements.

Construction of the WRP will require outfall construction and other facilities in the Santa Clara River. As a result, the applicant has requested the Section 404 Permit and the Master Lake/Streambed Alteration Agreement to allow for all such facilities. The WRP also will require access to and from SR-126.

Homestead. The applicant proposes to develop the Homestead tract map site, located within the boundary of the approved Specific Plan, north of SR-126 between San Martinez Grande Canyon Road and the Los Angeles County/Ventura County line. The proposed Homestead tract map consists of a total of 5,777 single-family and multi-family residences, 1.25 million square feet of commercial uses, elementary schools, neighborhood parks, junior high school, and high school, trails, and other amenities. A tract map submittal has been made to Los Angeles County; however, there has been no NOP of the EIR for the Homestead project, and no firm date has been provided for release of the Draft EIR.

Table 1.0-3, Landmark Village Statistical Summary, provides a specific breakdown of the proposed Landmark Village tract map site by land use designation, area, lots, lot size, or square footage, dwelling units, and dwelling unit density per acre. Other uses that fall within the land use designations identified on **Table 1.0-1** include electric and natural gas infrastructure, telephone and cable television lines, fiber optics, potable and non-potable water conveyance systems, and sewer/wastewater conveyance systems. The project's technical characteristics are described further on the following pages.

**Table 1.0-3
Landmark Village Statistical Summary**

Land Use	Area (gross acres)	Lots	Lot Sizes or Square Footage	Total Units or Square Footage	Avg. Density (du/acre or FAR ¹)
Residential					
Single-Family	48.7	308	4,500/5,500/6,000	308 du	6.3
Multi-Family	74.0	19	--	1,080 du	14.6
Mixed-Use/Multi-Family	5.9	2	--	56 du	9.5
Subtotal	128.6	329	--	1,444 du	11.2 average
Mixed-Use/Commercial	33.935-20	24	--	1,033,000 sq. ft. ³	0.71 0 FAR
Elementary School	9.20	1	N/A	N/A	N/A
Fire Station	1.30	1	--	N/A	N/A
Open Space²					
Parks	15.916-1	2			
Recreation Centers	5.2	3			
Open Space	43.4	84	N/A	N/A	N/A
Trailhead	<u>0.3</u>	1			
Subtotal	64.865-0	90			
Park and Ride	1.0	1			
Roads	53.89	12	N/A		N/A
TOTAL	292.6 ac	458		1,444 du 1,033,000 sq. ft.	

Source: Vesting Tentative Tract Map No. 53108 (revised September 20, 2004).

¹ FAR = floor area ratio and du = dwelling unit

² The SEA/SMA lies just to the south of the tract map boundary and the acreage is not reflected in this table.

³ 902,000 of non-residential (commercial with a mixed use (MU) classification and 131,000 within a commercial classification.

The proposed Landmark Village project permits a variety of housing types ranging from single-family units with gross densities from 7.4 to 9.6 dwelling units per acre, to multi-family units with densities from 8.5 to 23 dwelling units per acre. Two residential housing types are proposed for the tract map site: single-family (detached) and multi-family (attached and detached). **Figure 1.0-11** shows the location of the proposed single-family units and the lot locations for the proposed multi-family units.

(a) Single-Family Residential Component

The single-family housing type is characterized by a traditional lot orientation at net densities ranging from 4.4 to 8.2 dwelling units per acre. These lots are proposed to be located along both private and public streets and lot sizes predominantly range from approximately 4,500 to 6,000 square feet. Site development would utilize alleyways and provide access to garages located at the rear of the lot, or alternate access via the street, but with recessed or side-entry garages to minimize the visual presence of the garage on the street scene. A total of 308 single-family detached units are proposed. A typical building elevation for an alley-loaded single-family detached unit is depicted in **Figure 1.0-12**.

(b) Multi-Family Residential Component

The multi-family attached units provide for densities ranging from 8.5 to 23 dwelling units per acre. These units are typically characterized as townhome/duplex or condominium/apartment-style buildings. Parking may be at-grade, subterranean, or structured. A total of 1,136 multi-family units are proposed. A typical building elevation for attached multi-family housing is depicted in **Figure 1.0-13**.

(c) Mixed-Use/Commercial Component

Mixed-use areas combine retail/commercial and office, and civic, public, and recreational uses, connected by a vehicular, transit, and pedestrian network of streets, traffic circles, courtyards, and paseos. Residential uses are located in the areas surrounding the mixed-use and commercial sectors.

Up to 1,033,000 square feet of mixed-use/commercial uses are planned on approximately ~~33.936~~^{33.9365} acres of land in two locations on the tract map site. The mixed-use/commercial areas are planned to front along Wolcott Road (Village Quad) and Long Canyon Road (Village Center). All mixed-use/commercial areas are accessible by a vehicular, transit, and pedestrian street network, trails, paseos, and sidewalk areas. Supporting commercial uses likely to be found in the mixed-use areas include food service, banking, dry cleaners, merchandise sales, food sales, and various professional offices. This area also allows for multi-family residential development. Typical housing would be multi-family attached units and may include townhomes, condominiums, stacked flats, live/work units, and apartments. **Figure 1.0-14** shows the locations of the Village Quad and Village Center areas. **Figure 1.0-15** depicts the Conceptual Site Plan of the Village Quad area, and **Figure 1.0-16** depicts the Conceptual Site Plan of the Village Center area.

residential units and are consistent with the Specific Plan. These recreation areas would contain such amenities as a pool, spa, wading pool, shade overhead structure, barbeque areas and/or restroom building. These facilities would not provide off-street parking, because the areas they serve would be within convenient walking distance. The areas would be fenced and maintained by one or more homeowner associations.

(g) Fire Station

Consistent with Mitigation Measure 4.18-4 of the Newhall Ranch Specific Plan Program EIR, the applicant is negotiating an MOU with the County Fire Department that would require up to three fire stations within the Specific Plan. One fire station is to be constructed within the mixed use commercial area found west of Long Canyon Road. A conceptual agreement between ~~the~~ Newhall Land and the Fire Department includes the construction by Newhall Land of an approximately 11,000-square-foot station within Landmark Village on a minimum 1.25-acre net building pad. In accordance with this agreement, the fully constructed, equipped, and furnished station shall be conveyed to the Fire District prior to the issuance of the 723rd certificate of occupancy issued for the Landmark Project. The station will house seven firefighters, 24 hours a day.

It should be noted that both the station and building pad sizes exceed the requirements of the approved Newhall Ranch Specific Plan. Additionally, the approved Specific Plan required Newhall Land to provide funding for the construction of the station, rather than constructing the station, and provide funding for its pro-rata share of equipment for the station. In summary, the Specific Plan required Newhall Land to dedicate two, 1-acre, fire station sites (the third station was to be constructed on the Del Valle Fire Department Training Facility) and provide funding to construct three stations. Two of the stations would not exceed 6,000 square feet, and the third was to not exceed 8,500 square feet.

As required by the Specific Plan, Newhall Land and the Fire Department will enter into a MOU to finalize the Newhall Ranch requirements associated with the Fire Department.

(h) Trails and Paseos

The approved Specific Plan's Master Trails Plan (Specific Plan Exhibit 2.4-5) provided broad, general trail alignments and classifications to ensure that Riverwood Village would be linked to the greater Newhall Ranch via the Regional River Trail and the Community Trail network. **Figure 1.0-19** depicts the Specific Plan's Master Trails Plan as it relates to the Landmark Village portion of Riverwood Village.

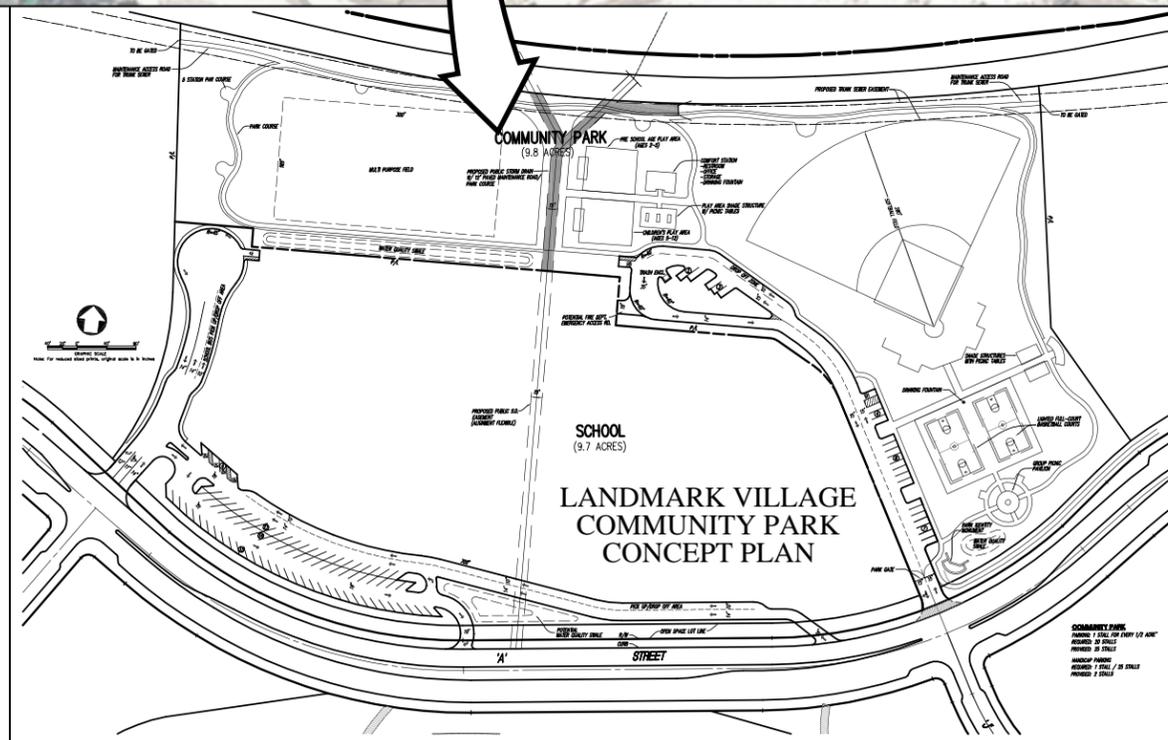


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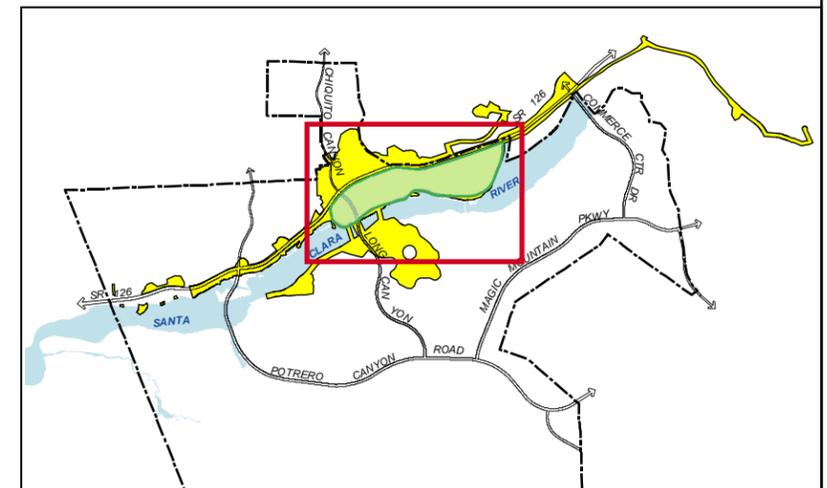
- Community Park
- Elementary School

Land Use:

- A** Apartment – 3 Story
- B** Condominium – 3 Story
- C** Detached Condominium – 2 Story (32' MDE-Condo 1)
- D** Detached Condominium – 2 Story (38' MDE-Condo 2)
- E** Mixed Use/Condominium – 2 Story
- F** Mixed Use/Commercial – 2 Story
- G** Commercial
- H** Park
- I** Recreation
- J** School
- K** Fire Station



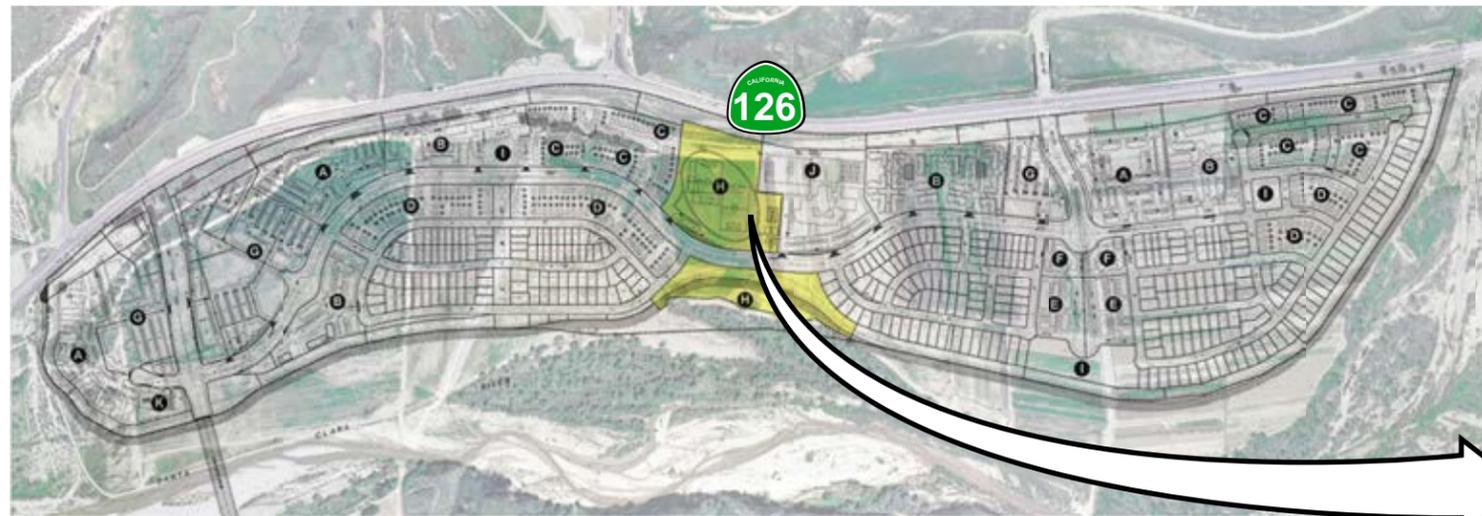
Note: The Regional Planning Commission recommended approval of the proposed project, along with a change to the configuration of the elementary school/community park. The proposed modified configuration is shown on Figures 1.0-17 and 1.0-18, consistent with the Commission's recommendation. The black and white exhibit is the Regional Planning Commission recommendation.



SOURCE: PSOMAS – August 2007, Impact Sciences, Inc. – September 2006

FIGURE 1.0-17

Elementary School/Community Park



Depiction of Passive Area



**NEWHALL LAND
LANDMARK VILLAGE (VTTM 53108)
COMMUNITY PARK - LOT 344
SCHEMATIC LANDSCAPE DESIGN PLAN**



Note: This community park orientation was approved by the Regional Planning Commission

Legend:

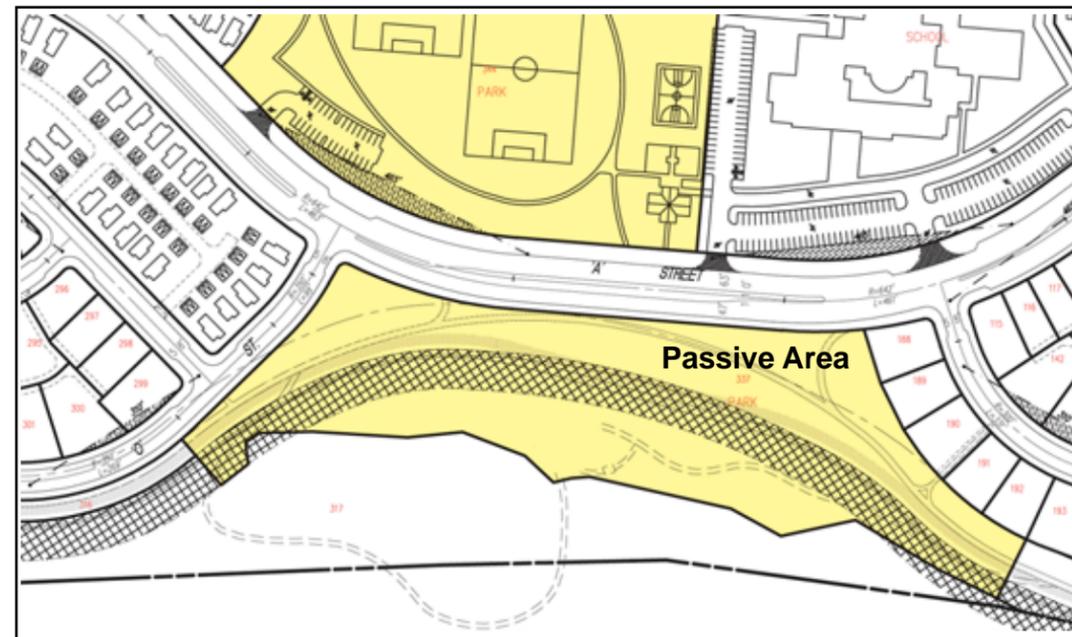
- Community Park
- Buried Bank Stabilization

Land Use:

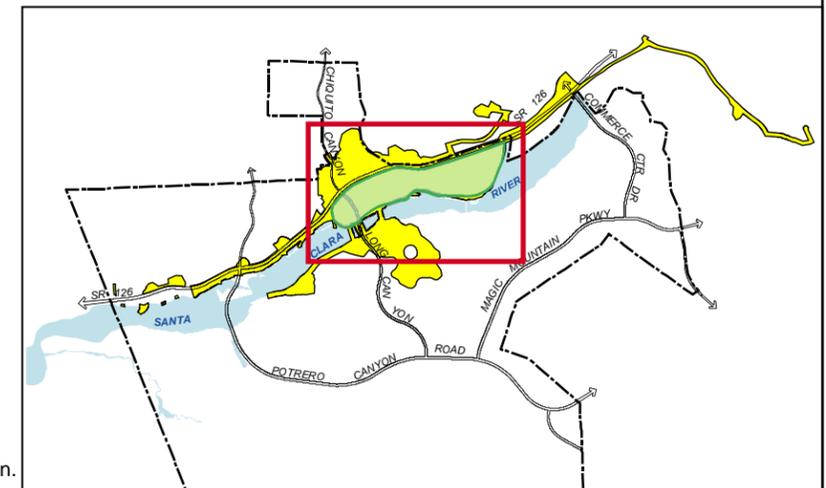
- A** Apartment – 3 Story
- B** Condominium – 3 Story
- C** Detached Condominium – 2 Story (32' MDE-Condo 1)
- D** Detached Condominium – 2 Story (38' MDE-Condo 2)
- E** Mixed Use/Condominium – 2 Story
- F** Mixed Use/Commercial – 2 Story
- G** Commercial
- H** Park
- I** Recreation
- J** School
- K** Fire Station



NOT TO SCALE



Note: The Regional Planning Commission recommended approval of the proposed project, along with a change to the configuration of the elementary school/community park. The proposed modified configuration is shown on Figures 1.0-17 and 1.0-18, consistent with the Commission's recommendation.



SOURCE: PSOMAS – August 2007, Impact Sciences, Inc. – September 2006

FIGURE 1.0-18

Conceptual Site Plan – Community Park

The project's circulation plan is characterized by a system of local streets with access to and from a curvilinear road ("A" Street) that traverses the site in an east/west direction. Two north/south roadways, Wolcott Road and Long Canyon Road, would connect "A" Street to the off-site highway system (SR-126). The primary function of "A" Street is to provide connectivity between the Landmark Village neighborhoods and access from local streets to the arterial highway system.

The project proposes to construct Long Canyon Road and the connection to Wolcott Road, which would provide regional access to and from SR-126. The proposed project would construct interim signalized intersections at Wolcott Road and Long Canyon/Chiquito Canyon Road with SR-126 and would facilitate the project's planned future interchange alignment for Long Canyon Road/SR-126. This future grade separated crossing would be constructed if future traffic volumes determine that the crossing is warranted. In conjunction with the construction of the interchange, the existing Chiquito Creek culvert under SR-126 would be demolished and bridged. The environmental impacts associated with this future crossing is evaluated in this EIR. The proposed project also would construct a network of collector streets to provide local access to and from land uses associated with the project (see **Figure 1.0-10, Landmark Village Vesting Tentative Tract Map No. 53108**). These in-tract roadways would connect to "A" Street, Wolcott, and Long Canyon Roads. All roadways would be constructed in substantial conformance with the requirements of the Specific Plan and, in many cases, would require only minor project-specific modification to the street sections set forth in the Los Angeles County Subdivision Code.

The one change from the Specific Plan's Master Circulation Plan would be the project applicant's request to revise the "A" Street classification from a four-lane Secondary Highway to a two-lane Collector Street. The Secondary Highway designation is also included in the County's Master Plan of Highways and the Santa Clarita Valley Area Plan's Circulation Plan.

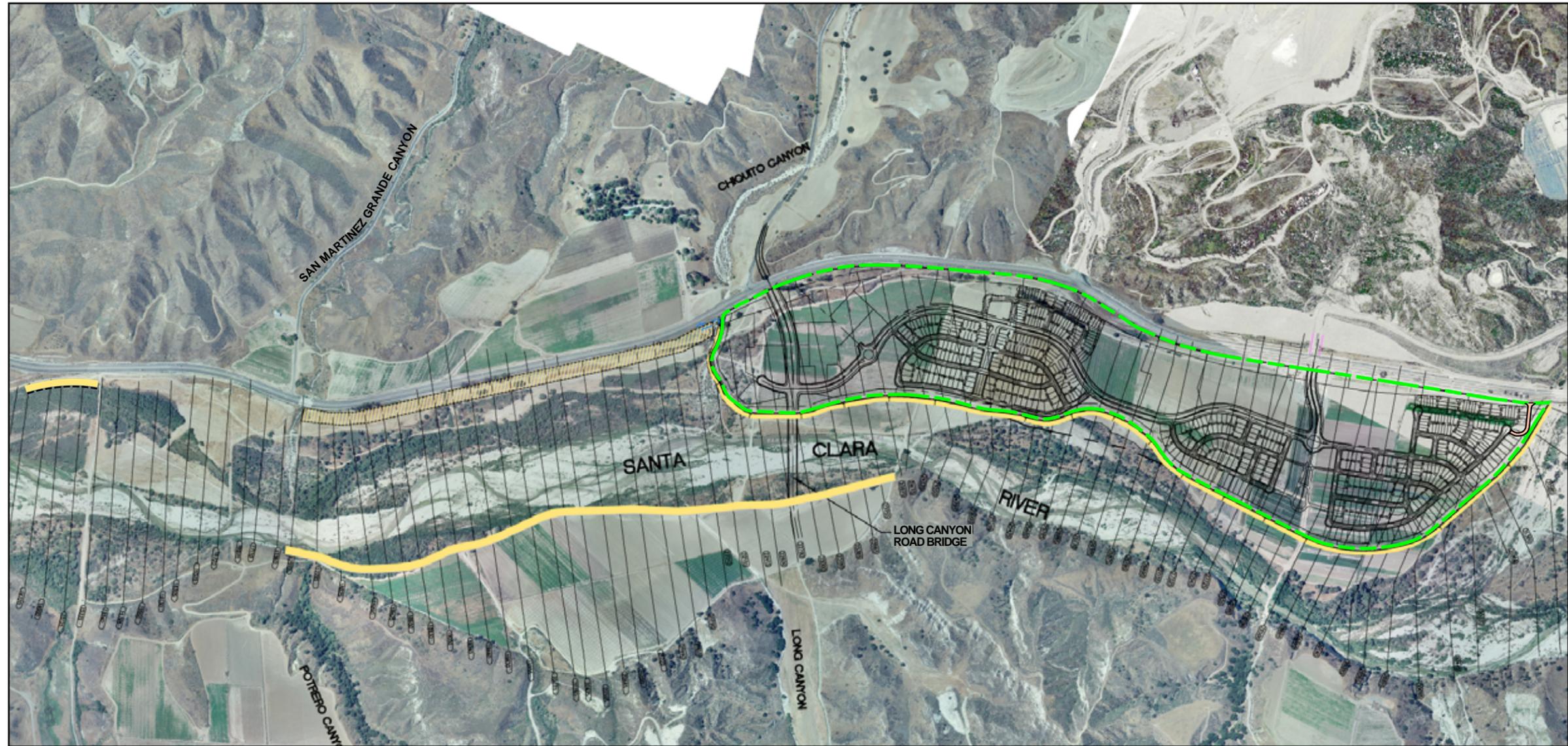
Figure 1.0-22, Cross-Section Comparison – Specific Plan Secondary Highway vs. Landmark Village Collector, depicts a cross-section for a Secondary Highway as specified by the County. As shown, a Secondary Highway designation provides 94 feet of right-of-way that contains 64 feet of travel lanes separated by a 14-foot median with an 8-foot parkway on either side of the road. For purposes of comparison, **Figure 1.0-22** depicts the cross-section for the proposed Landmark Village "A" Street Collector. As shown, the proposed Collector Street typically provides 60 feet of travel lane, which includes 14 foot lanes, 8 foot bike lanes, and 8 foot parking lanes on each side of the street, along with a 14-foot median, for a total street width of 74 feet from curb-to-curb. An additional 26 feet of landscape parkway and meandering sidewalk is found on the north side of the street, while the north-south side contains 4 feet of landscape parkway, along with a 6-foot paseo/walkway. The proposed Collector Street's total right-of-way is 110 feet in width, which is slightly different than the Secondary Highway designation.

(k) Drainage/Flood Control

The Landmark Village project-level drainage and water quality plan is consistent with, and implements, the Specific Plan's approved Conceptual Backbone Drainage Plan (Specific Plan Exhibit 2.5-1). The primary objective in developing the Specific Plan Backbone Drainage Plan was to identify conceptual drainage and flood protection system for the entire Specific Plan site, while preserving the Santa Clara River as an important natural resource. In order to satisfy this objective, several program-level criteria regarding the form and function of the Santa Clara River were identified early in the planning process, which formed the basis for establishing the River Corridor SMA/SEA 23. In addition, the Specific Plan established a commitment to meet the ongoing requirements of all National Pollutant Discharge Elimination System (NPDES) Permits, including drainage/water quality improvements, such as water quality basins, vegetative swales, and inlet and outlet structures. The locations and sizing of such improvements were to be determined as part of the Newhall Ranch tentative subdivision map process. **Figure 1.0-24** depicts the Specific Plan's Conceptual Backbone Drainage Plan as it relates to the Landmark Village project site.

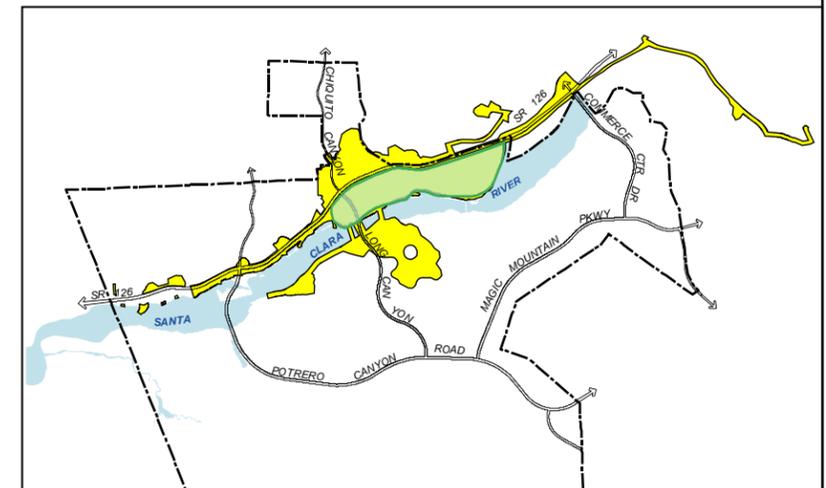
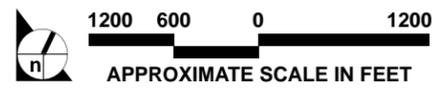
Figure 1.0-25, Landmark Village Drainage and Water Quality Plan, illustrates the project's proposed drainage and water quality plan and related improvements. The plan incorporates methodologies ~~to meet or that~~ exceed the ongoing NPDES Permit requirements and conforms to the drainage and water quality requirements of the Specific Plan. The plan includes a comprehensive series of drainage, flood control, and water quality improvements designed to allow for a system to both protect development and preserve the Santa Clara River.

The proposed Landmark Village Drainage Concept is designed to provide drainage and flood protection, ~~and to maintain storm water flows from the project during and after buildout at a level approximately equal to or less than pre-development conditions.~~ As proposed, on-site surface runoff would be intercepted in retention and/or biofiltration BMPs to the extent feasible. ~~by curb, debris, and/or desilting inlets, and conveyed to a network of storm drains that lead to a series of treatment structures, including water quality basins and vegetated swales, prior to discharge into the Santa Clara River.~~ In commercial areas, parking lot and roof runoff would be directed through landscaped parkways and grassy swales or through sections of pervious pavement to provide initial treatment prior to discharge into the drainage system. Flows from several unimproved drainages that drain the undeveloped watershed located north of SR-126 and discharge into the Santa Clara River would be intercepted and conveyed through the site to the river. At the confluence with Castaic Creek, the existing bank of the Santa Clara River would be modified to allow passage of storm flows generated during the County Capital Storm event (Qcap). Please refer to **Section 4.2, Hydrology**, of this EIR for a detailed discussion of existing and post-development drainage conditions and related improvements on the project site.



Legend:

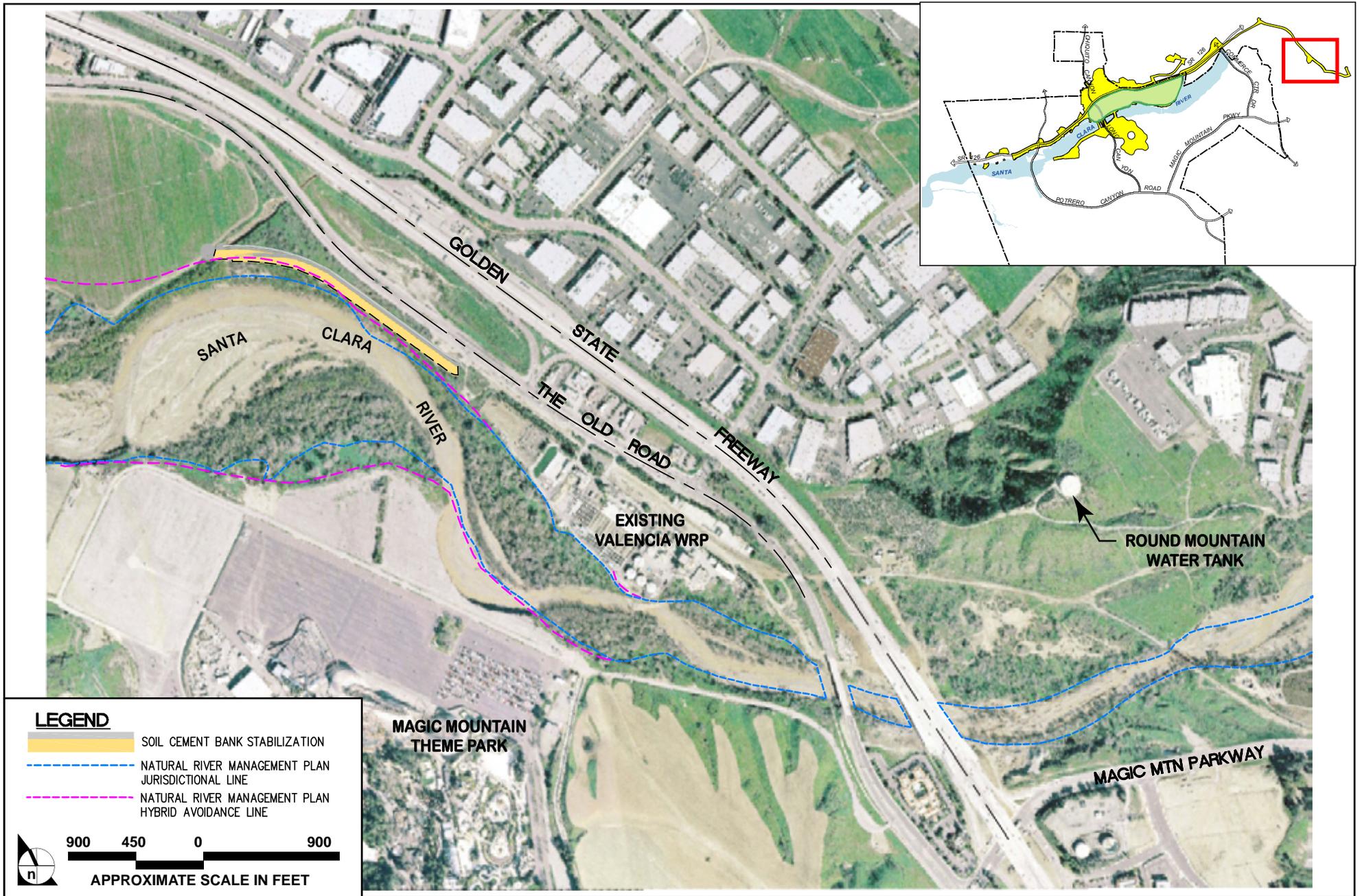
- - - Tract Map Boundary
- Proposed Soil Cement Bank Stabilization
- Proposed Turf Reinforced Mat Bank Stabilization
- Temporary Access Road



SOURCE: PACE Engineering – June 2005

(Revised) FIGURE 1.0-23

Location of Long Canyon Road Bridge and Proposed Bank Stabilization



SOURCE: PACE – August 2008

(New) FIGURE 1.0-23a

The Old Road Bank Stabilization

Project Design Features (PDFs) incorporated into the project to address water quality and hydrologic impacts include site design, low impact development (LID), source control, treatment control, and hydromodification control Best Management Practices (BMPs). As part of the proposed project, LID BMPs will be implemented that retain runoff from the 0.75-inch water quality design storm. This LID BMP Implementation Plan will be conceptually similar to LID requirements in the recently adopted Ventura County MS4 Permit. As currently planned, stormwater runoff from all urban areas within the project will be routed to retention and/or biofiltration BMPs to the extent feasible.~~bioretention areas, vegetated swales, and/or extended detention basin treatment control BMPs.~~ The extended detention basin, vegetated swales, and bioretention areas will be designed to operate off-line, receiving dry weather flows, small storm flows, and the initial portion of large storm flows from a low-flow diversion structure in the storm drain. Excess runoff would be conveyed to a network of storm drains that lead to a series of regional infiltration/biofiltration facilities prior to discharge into the Santa Clara River. Please refer to **Section 4.3, Water Quality**, of this EIR for detailed discussion of the water quality PDFs incorporated into the project drainage concept.

(I) Bank Stabilization

The approved Newhall Ranch Specific Plan contemplated installation of bank stabilization along portions of the Santa Clara River to protect development from flood hazards while preserving the river as a natural resource. The approved Specific Plan contained specific criteria to be followed by projects implementing the Specific Plan (see, Specific Plan [May 2003], Chapter 2, pp. 2-71 through 2-75). The environmental effects of the bank stabilization were analyzed in the certified Newhall Ranch Specific Plan Program EIR, but are further analyzed at the tract map level as part of this EIR.

Consistent with the Specific Plan, the Landmark Village project proposes buried bank stabilization where necessary to protect against flooding and erosion pursuant to Federal Emergency Management Administration (FEMA) and Los Angeles County Department of Public Works' requirements. The bank stabilization is designed and would be constructed to retain the Santa Clara River's significant riparian vegetation and habitat, to allow the river to continue to function as a regional wildlife corridor, and to provide flood protection pursuant to Los Angeles County standards.

The location of the protection was illustrated earlier on **Figure 1.0-23**. As shown, the proposed buried bank stabilization extends along the Santa Clara River and Castaic Creek adjacent to and downstream of the tract map site. In total, approximately 18,600 linear feet (LF) of bank would be provided with bank stabilization. This would include approximately 11,000 LF fronting the southern boundary of the tract map site on the north bank of the Santa Clara River, and approximately 6,400 LF on the south bank of the river, beginning at the Long Canyon Road Bridge and extending both east and west.

The bank stabilization proposed downstream of Long Canyon Road Bridge is necessary to mitigate impacts associated with the Landmark project. An additional approximately 1,200 LF of soil cement bank stabilization is located downstream of the project site, and is designed to protect the approved WRP. The bank stabilization related to the WRP was approved and analyzed at a project-level with the Newhall Ranch EIR.

The project also includes the construction of buried bank stabilization between the Santa Clara River and the Old Road, north of the existing Valencia WRP. This bank stabilization was approved with the Santa Clara River Natural Management Plan (NRMP) and was analyzed within the certified Environmental Impact Report/Environmental Impact Statement (EIR/EIS) prepared for the NRMP.

Additionally, the project includes the installation of Turf Reinforcement Mat (TRM) or a similar bank stability protection along 6,600 LF of the utility corridor west of the Landmark Village tract map site. Finally, the project includes the installation of various stormwater outlet structures (**Figure 1.0-25a**, both within the tract map site and off site. The off-site outlet structures and energy dissipaters would be located at the outlet of Chiquito Canyon Creek, San Martinez Grande Creek, Long Canyon Creek, and other minor culverts across SR-126.

Figure 1.0-26, Bank Stabilization – Typical Cross-Section, depicts a typical cross-section for buried bank stabilization. As shown, the buried bank stabilization approach uses soil cement, which is buried beneath the existing banks of the river to resist future scouring. The following guidelines will be applied in selecting the proper protection system:

- Buried soil cement bank protection will be used in situations where the stream velocities are high or where there is the potential for lateral bank migration based on stream characteristics. Alternatively, buried ungrouted rip-rap will be used if in situ soils do not meet soil cement design requirements.
- If there is not sufficient space to allow covering of the revetment with the earthen fill because of physical constraints such as topographic features or existing facilities, then exposed ungrouted rock rip-rap will be used if the velocities do not exceed the limitations of the rock.
- Locations where there are proposed bridge crossings would require the banks underneath the bridge to have concrete gunite or soil cement slope protection.

As to buried bank stabilization, the soil placed on top of the bank stabilization ~~is~~would be replanted with native vegetation to return the disturbed area to its natural condition upon completion of construction. Typically, the lining must be buried at least twice the height of the lining in order to resist scouring. The intent of burying the soil cement is to resist scouring and it needs to be placed deep enough to resist scouring during a capital flood. Burying the toe of the lining requires temporary excavation and backfilling. A temporary construction zone of approximately 75 feet would occur at the base of the bank

protection in order to bury the material. The original channel elevation would be restored after construction. The area would also be replanted with native vegetation.

Figure 1.0-27, Bank Stabilization Techniques, provides illustrations of exposed and buried bank stabilization techniques to be used on this project. This figure also depicts the relationship between the Santa Clara River, buried bank stabilization, and trail areas. The representative photographs used in this figure are taken from previously constructed projects located in the Valencia community, in which exposed and buried bank stabilization were used.

(m) Utility Corridor

The ~~U~~tility ~~C~~orridor consists of off-site and on-site utility infrastructure ~~for~~ within the Landmark Village ~~P~~roject site (please see **Figures 1.0-29, 1.0-30, and 1.0-32** for illustrative views of the potable water infrastructure, recycled water storage system, and wastewater/sewer plan). The corridor ~~will~~ would provide new utilities as well as relocating existing facilities to serve the project site. The utilities would include a gravity sewer, pressure sewer force main, potable water, recycled water, agricultural water, electrical power, telephone, cable television, and natural gas.

The utility corridor alignment begins from the west at the proposed Newhall Ranch WRP) adjacent to the Los Angeles/Ventura County line. The corridor is generally located on the south side of SR-126 and extends easterly, crossing under Martinez Grande Creek, and Chiquito Canyon Creek, to the Landmark Village tract map site.

The utility corridor crosses Landmark Village through various routes including Long Canyon Road, "A" Street, Wolcott Way, on-site areas along the south of SR-126, and along the trail behind the Santa Clara River ~~B~~ank ~~P~~rotection. From the Landmark Village tract map site, the gravity sewer, and the force main extends east by crossing under Castaic Creek south of SR-126. The potable and recycled water lines and agricultural water lines cross SR-126 to the north before crossing under Castaic Creek north of SR-126.

After crossing under Castaic Creek, the utilities continue easterly in either Hancock Parkway on the north side of SR-126 or along the ~~S~~outh ~~S~~ide of SR-126 adjacent to Travel Village until ~~they meet~~ the intersection of Commerce Center Drive and Henry Mayo Drive at the east end of Travel Village. The utility corridor then extends easterly along Henry Mayo Drive to The Old Road. It then continues south in The Old Road and terminates at the existing Valencia Water Reclamation Plant #32—near the intersection with Rye Canyon Road. At this point, the recycled water main continues south and east along the north bank of the Santa Clara River until it turns uphill (north) and connects to the existing

Round Mountain potable water tank, which ~~will~~would be converted to recycled water as part of this project.

Franklin Parkway and Wolcott Way ~~is~~are used for utility service to Landmark Village. Electric power, telephone, cable television, and water are brought across SR-126 to the Landmark Village project from the existing terminus of these utilities near the post office site approximately 3,500 feet east of Wolcott Way.

Various utilities, including potable water, recycled water, well and pipeline, gravity sewer, gas, electrical power, telephone, and cable television also extend from the utility corridor north across SR-126 at Chiquito Canyon Road and at San Martinez Grande Canyon Road.

(n) Potable Water

The Landmark Village project-level potable and recycled water plan is consistent with, and implements, the Specific Plan's approved Conceptual Backbone Water Plan (Specific Plan Exhibit 2.5-2). This plan sets forth on-site storage and water distribution systems to provide adequate water service to the entire Specific Plan site. The Specific Plan also committed to the provision of recycled water, to the extent available, for irrigation use. **Figure 1.0-28** depicts the Specific Plan's Conceptual Backbone Water Plan, as it relates to the Landmark Village project.

The Valencia Water Company would be the retail water company providing potable water to the project site.

As shown on **Figure 1.0-29, Landmark Village Potable Water System Infrastructure**, the proposed water delivery system consists of one new water tank and three pressure regulating stations connected to a network of 18- to 20-inch water mains that generally follow the southern right-of-way for SR-126 and major roadways. A network of 8-inch lines located within the planned roadway network would distribute the water for connection to laterals located on individual lots.

A single water pressure zone (Zone 1A) overlies the project site, and is supplied potable water via the three pressure regulating stations from Zone 1 that will provide all the potable water supply for the system serving Zone 1A, which contains the proposed Landmark Village VTTM No. 53108. Pressure Zone 1 serves uses at an elevation of less than 1,160 feet above mean sea level (MSL) and is comprised of three existing storage tanks with a combined storage capacity of 8.3 million gallons and numerous sources of supply consisting of existing groundwater wells and CLWA turnouts.

Potable water demands for Landmark Village will be met by using groundwater produced from the Alluvial aquifer from newly constructed replacement wells located within the Valencia Commerce Center

that have been approved and permitted by the California DHS. These wells replaced older wells used for irrigation that are no longer active having been permanently closed as directed by DHS. In August 2004, Valencia Water Company received an amended water supply permit from DHS for approval and construction of four domestic water supply wells. Two of the four replacement wells are needed for the project and will operate by delivering water to Zone 1 and then ~~regulated~~ directed into Zone 1A to meet the demands of the project. The additional wells will be used to meet future needs demands when needed.

(p) Wastewater

The Landmark Village wastewater/sewer plan is consistent with, and implements, the Specific Plan's approved Conceptual Backbone Sewer Plan (Exhibit 2.5-3). This plan set forth a system for wastewater/sewage collection for the entire Specific Plan site. The Specific Plan also committed that all sewer system facilities would be designed and constructed for maintenance by the County, the County Sanitation Districts of Los Angeles County (CSDLAC), or a new County sanitation district in accordance with their manuals, criteria and requirements. **Figure 1.0-31** depicts the Specific Plan's Conceptual Backbone Sewer Plan, as it relates to the Landmark Village project site.

Figure 1.0-32, Landmark Village Wastewater/Sewer Plan, illustrates the precise routing of sewer lines and the delivery system to serve the Landmark Village project site. The plan provides the tract map level of detail required to provide adequate sewer service to the project site, consistent with the Specific Plan.

The project-level wastewater/sewer collection system consists of gravity sewers, forced mains, and pump station. The long-range plan is for the approved Newhall Ranch WRP to be constructed exclusively to serve uses within the Specific Plan area. The WRP's capacity is 6.8 mgd, with a maximum flow of 13.8 mgd. A new County sanitation district was formed in 2006. The environmental effects of constructing and operating the WRP were evaluated at the project-level in the certified Newhall Ranch Specific Plan Program EIR. In the interim, several options are available to treat wastewater generated by the proposed project. One option is to construct an initial phase of the Newhall Ranch WRP to serve this subdivision, with buildout of the WRP occurring over time as demand for treatment increases. Under this approach, a network of 8-inch wastewater collectors would convey effluent to an 18-inch sanitary wastewater interceptor line. This interceptor line would be placed in a 7.5-foot-wide by 15-foot-deep (average depth) trench found south of the SR-126 right-of-way within the utility corridor. It will begin near the intersection of the Old Road and Henry Mayo Drive and extend west approximately 26,000 LF where it would connect to the headworks of the Newhall Ranch WRP. The Newhall Ranch WRP is designed to meet Los Angeles County Department of Public Works, CSDLAC, and state standards and requirements. The construction period is estimated to take approximately 6-8 months.

The second option is to construct a pump station on the Landmark Village project site where wastewater would be temporarily pumped back to the existing Valencia WRP (District No. 32), located upstream of the project along I-5, until such time as the first phase of the Newhall Ranch WRP is constructed. Under an Interconnection Agreement with the SCVSD, the Valencia WRP can temporarily treat wastewater for up to 6,000 Newhall Ranch dwelling units until such time as the Newhall Ranch WRP is constructed and operational. The Interconnection Agreement was developed to establish a logical plan for the development and administration of the new NRCSD and its infrastructure, and it sets conditions under which the first 6,000 homes in Newhall Ranch may temporarily discharge wastewater to the existing

Valencia WRP. The conditions include payment of the standard connection fee (fair share of the cost of the existing infrastructure) and transfer of title of the 22-acre Newhall Ranch WRP site to the NRCSD. Newhall Ranch residents also would pay the Sanitation Districts an annual service charge to recover the full cost of treating their wastewater at the Valencia WRP.

Temporary treatment of wastewater at the Valencia WRP would not eliminate the need for the developer to construct the Newhall Ranch WRP; instead, the temporary treatment of wastewater at the existing Valencia WRP is a practical engineering decision based on the need to build up an adequate, steady flow of wastewater before starting up the Newhall Ranch WRP. Such an approach would match the slower pace of the development, but would not eliminate the Specific Plan requirement for construction of the Newhall Ranch WRP. (A copy of the Interconnection Agreement is found in **Appendix F4.11** of the Landmark Village Final EIR.)

Under this approach, a sanitary sewer force main line would be placed in a 3-foot-wide by 4.5-foot-deep trench from the tract map site easterly approximately 18,000 LF to the existing CSDLAC lift station near the intersection of the Old Road and Henry Mayo Drive. The existing lift station will convey wastewater to the District 32 WRP. The alignment of the force main will be parallel with the alignment of the gravity interceptor sewer. Off-site wastewater improvements would be completed in one phase over a 6- to 12-month period.

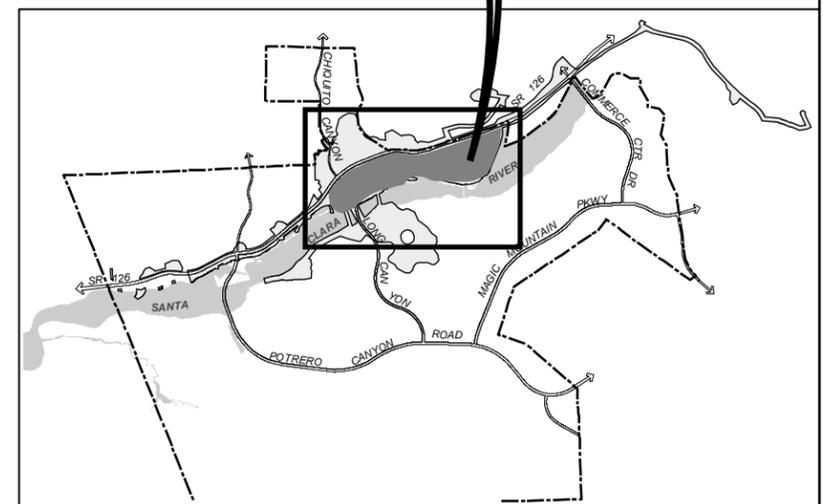
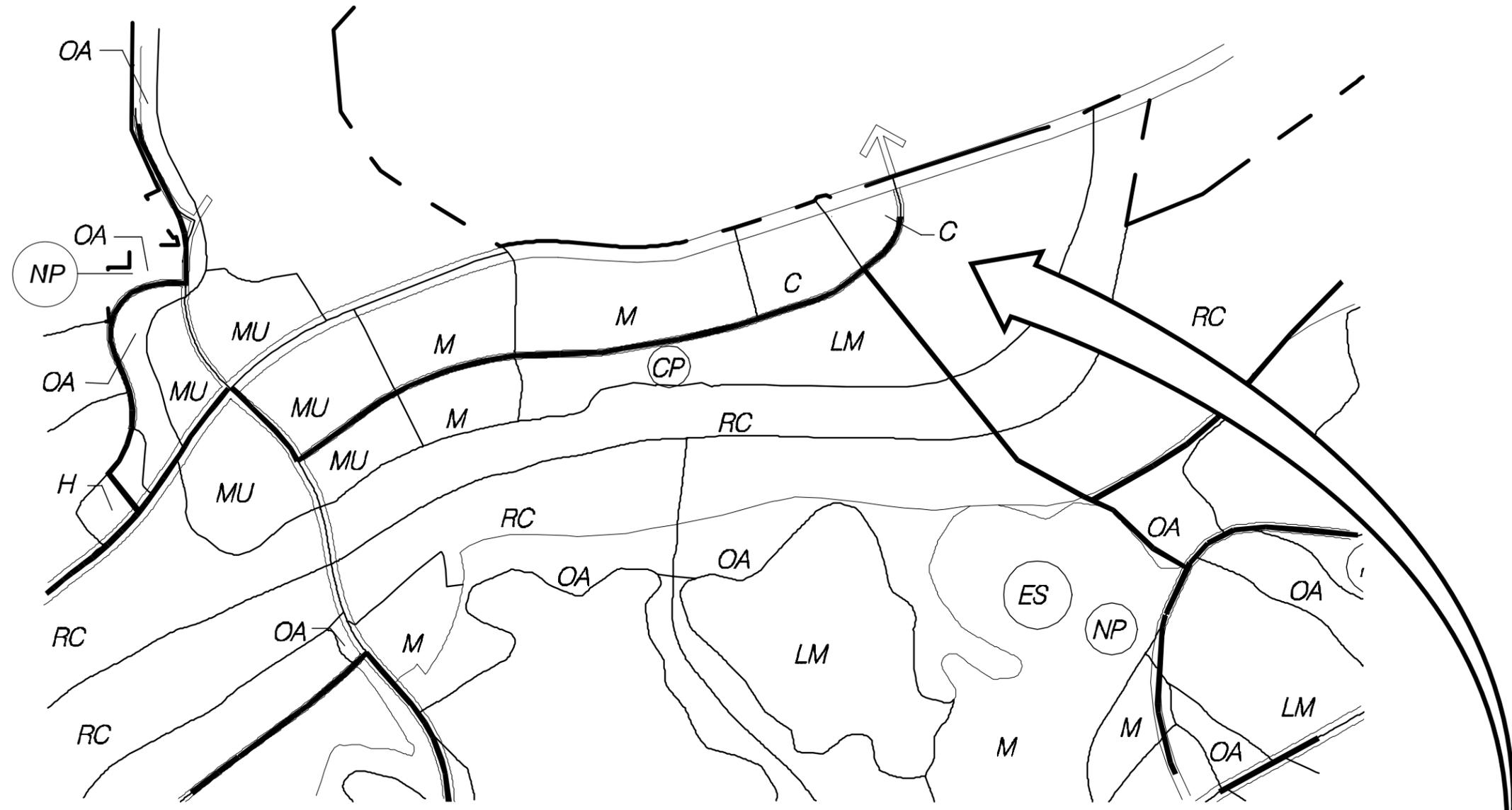
The selection of one of the options will be made during final design and prior to construction. Please refer to **Section 4.11, Wastewater Disposal**, of this EIR for a detailed discussion of the wastewater collection and conveyance system.

(q) Electrical/Dry Utilities

Electrical utilities to serve the proposed project would be constructed in two phases. The first phase would relocate the existing 66 kilovolt (kV)/16kV overhead electric power line running parallel to SR-126. New power lines would be constructed from The Old Road west beneath the existing Castaic Creek Bridge to approximately 300 feet west of the Commerce Center Drive and Harrison Parkway intersection within an existing Southern California Edison (SCE) easement. The second phase would construct new transmission lines continuing west along the existing SCE easement approximately 12,000 LF crossing the Chiquita Canyon Landfill, Chiquito Canyon Road, and Chiquito Canyon Creek. An interim 66kV/16kV overhead line will continue southerly approximately 1,200 LF along the west side of Chiquito Creek and tie in to the existing electric lines approximately 700 feet north of SR-126. The existing 66KV/16KV overhead line would be relocated to the north as described above prior to the grading activities on the north side of SR-126. To serve the project, a new 16kV line would then be constructed westerly along

Franklin Parkway and placed under ground from the point of connection near the water tank access road. From the point of connection, electric lines would be placed in a joint trench extending west approximately 3,500 feet to Wolcott Way, then south approximately 700 feet across SR-126 into the tract map site. Within the tract map site, electric lines would be placed in a joint trench extending west approximately 8,000 feet along A Street to Long Canyon Road and extend north across SR-126 to connect to the existing 66KV/16KV overhead line. This would be the primary electric service for the tract map site.

Construction is anticipated to be completed in six to eight months.



LEGEND

-  SEWER LINE SYSTEM
-  PROPOSED WATER RECLAMATION PLANT

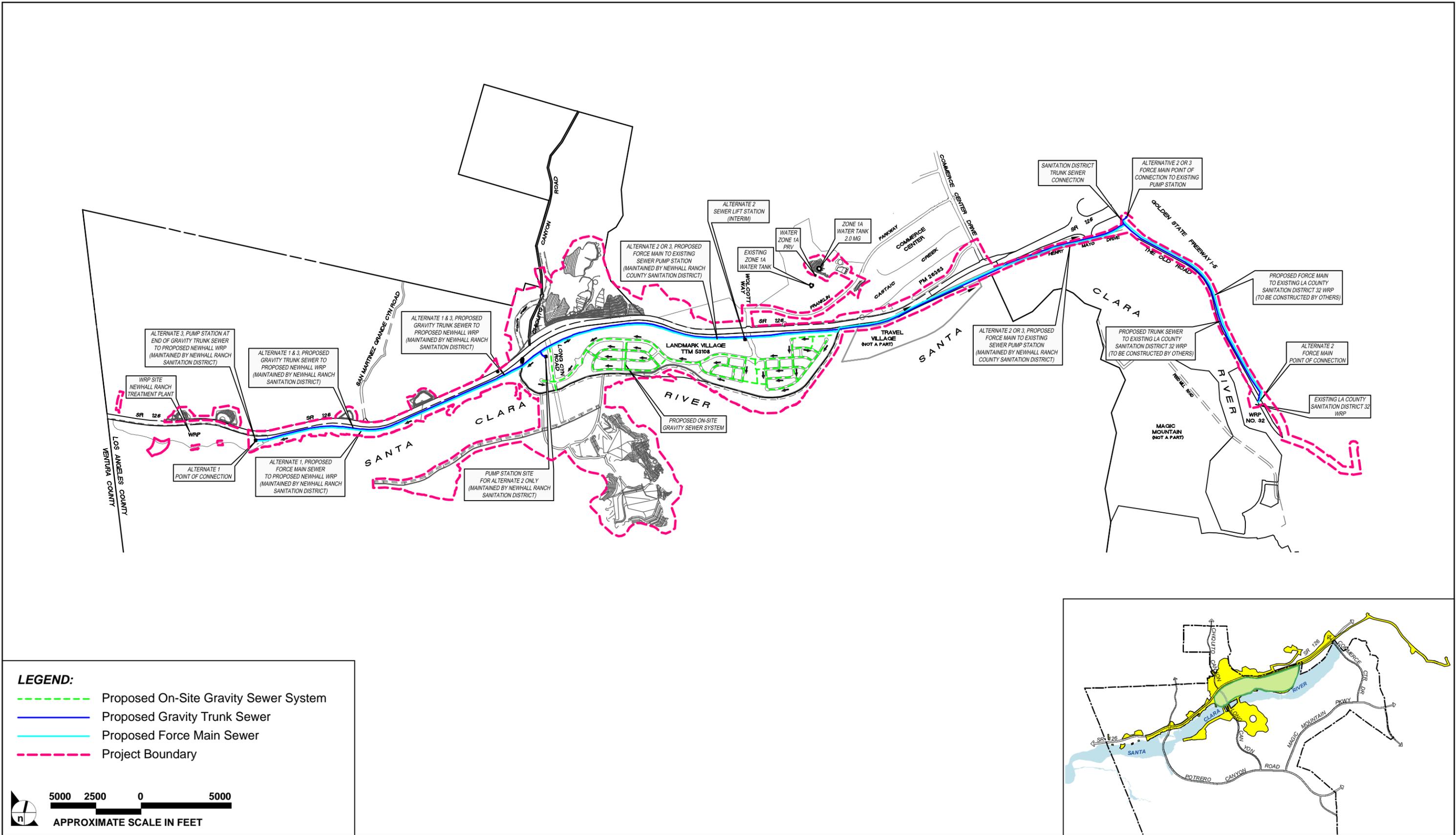


NOT TO SCALE

SOURCE: River Village Planning Notebook – August 2003

(Revised) FIGURE 1.0-31

Landmark Village Portion of Specific Plan – Conceptual Backbone Sewer Plan



SOURCE: PSOMAS - November 2008

(Revised) FIGURE 1.0-32

Landmark Village Wastewater/Sewer Plan

(r) Natural Gas

A natural gas distribution main would be constructed in two phases to serve the tract map site. Currently, there is an existing 6-inch gas main within the SR-126 southerly right of way from The Old Road to Chiquito Canyon Road. In the first phase, an 8-inch main will be connected to the existing 6-inch main at the east end of the tract boundary adjacent to the Castaic Creek Bridge. The proposed 8-inch main will extend south from the existing main into Landmark, then extend westerly approximately 11,000 LF through the project site along the future "A" Street. The main then turns north at Long Canyon Road, then continues west within the utility corridor south of the SR-126 right-of-way an additional 7,800 LF to the proposed Newhall Ranch WRP. The 8-inch gas main would be placed in a 3-foot-wide by 5-foot-deep trench. The estimated construction date is 2010, with a projected installation time of 8 to 10 months.

The second phase of the gas distribution main would travel east of the tract map site along the north SR-126 right-of-way to Commerce Center Drive where it crosses SR-126 and continues east along ~~the south~~ Henry Mayo Drive right-of-way ultimately connecting to the existing gas main on The Old Road. The second phase is estimated to measure approximate 9,800 LF. The trench would be approximately 3-foot-wide by 5-foot-deep with an estimated construction period of approximately four to six months.

Franklin Parkway provides an alternate alignment to provide gas service to the project site. With this option, an 8-inch gas main will be constructed within the right of way of Franklin Parkway connecting to the terminus of an existing gas main near the U.S. Post Office site. The proposed main will extend westerly on Franklin Parkway, then southerly on Wolcott Way under SR-126 into the project site.

(s) Grading

~~Off-site grading is and transport are required at several locations—the Adobe Canyon borrow site and the Chiquito Canyon grading site in order to construct the Landmark Village tract map site and other project components. Up to 7 mcy of off-site grading and transport is estimated for the Landmark Village site. In addition to the Adobe Canyon borrow site that will would be excavated for soil needed to elevate the tract map site from the floodplain (approximately 5.8 mcy), the proposed project requires off-site grading in Chiquito Canyon for the construction of debris basins, water/wastewater facilities, and the utility corridor (approximately 1.2 mcy). improvements to SR 126, construction of debris basins, off site water tank and wastewater treatment facilities that would be connected to the tract map site by utility lines in the utility corridor that will also require grading.~~ Any existing utilities/pipelines/structures would be relocated, removed or abandoned in place in conjunction with the grading of the utility corridor. **Figure 1.0-33, Off-Site Improvements**, depicts the off-site grading locations, the haul routes, the location of the

proposed river crossing, the utility corridor, and the water tank locations. ~~Earthwork associated with these off-site improvements is described below.~~

~~In addition, P~~project-related grading would require ~~the movement of~~ approximately 4.2 million cubic yards of removal and recompaction of existing material within the Landmark Village tract map site, and up to 5.8 million cubic yards of import from the off-site Adobe Canyon borrow site within the approved Specific Plan boundary in order to meet the flood-control requirements of the tract map site. ~~The project~~ This remedial grading is consistent with, and implements, the Specific Plan's approved Conceptual Grading Plan (Specific Plan Exhibit 2.7-1), and the applicable Specific Plan Design Guidelines (Specific Plan Chapter 4, Section 4.8) for grading and hillside management. In addition, the environmental effects of grading the entire Specific Plan site were evaluated as part of the certified Newhall Ranch Specific Plan Program EIR, but are further analyzed at the project level in this EIR.

~~As to Adobe Canyon, T~~he off-site grading would involve excavating and reshaping of excavate and reshape the hills and depressions forming the ridge separating Long and Adobe Canyons. Much of this work would occur along the top and bluffs of an unnamed plateau located just west of Sawtooth Ridge. This plateau ranges in elevation from a low of 1,130 feet at its northern most point to a high of 1,220 feet in the southeast, which is characterized by an increasingly steeper grade. The proposed grading would excavate the southeastern portion of this plateau creating a gentler slope leading up to the top of the ridge. All grading activities would be conducted in a manner as to not disturb any of the soil within 300 feet of the spineflower area as recommended by a comment received on the Draft EIR. The resultant manufactured slope angle would range from 5:1 to 2:1 (horizontal/vertical). The grading would also alter the western facing slope leading up to the plateau creating a bench separated by two manufactured slopes stepping down the west facing ridgeline defining Adobe Canyon at a 3:1 grade. Additional earthwork is planned at the terminus of Adobe Canyon where a series of excavations would result in a manufactured slope approximately 100 feet in height at relatively uniform 3:1 grade. A series of benches, swales and debris basins would also be constructed to collect, convey and release runoff in a controlled manner. Up to approximately 5.8 ~~mcv million cubic yards~~ of earth ~~may would~~ be excavated from the Long Canyon/Adobe Canyon area and transported across the Santa Clara River to the tract map ~~and project site~~, using existing at-grade agricultural crossings ~~as the (i.e., haul routes)~~. It is expected that excavation and transport activities ~~will would~~ take approximately 10 months time. However, as with all construction and grading activities, the grading work is dependent upon the availability of the necessary equipment, weather, and economic/market conditions.

The second off-site grading site (Chiquito Canyon grading site) is located just north of SR-126 and east of the intersection with Chiquito Canyon Road. The Chiquito Canyon grading site is proposed on the ridgeline of a northeast-southwest trending hillside. The terrain on the southwesterly portion of the

ridgeline gently slopes toward the intersection in a “finger” shape where elevations reach approximately 950 feet above msl at its low point (slightly elevated above the roadbed). The terrain becomes progressively steeper and more rugged toward the northwest portion of the ridge, with the peak elevation reaching 1,160 feet above msl. The grading would lower the “finger” of land extending toward the intersection of Chiquito Canyon Road with SR-126 by approximately 60 feet when compared to the existing elevation. Rather than a gradual incline that extends upward at increasingly greater grade, the reshaped slope would approximate the grade of SR-126 for about 1,500 feet west of the intersection with Chiquito Canyon Road. At this point, the grading would create a manufactured slope that extends upward at a uniform 3:1 grade reaching a high of 1,160 feet above msl. A series of benches, swales and debris basins would also be constructed to collect, convey and release runoff in a controlled manner. Approximately 1.2 ~~mcu million cubic yards~~ of earth would be excavated from this area and placed as fill in the adjacent canyons or transported to stockpiles for use on the tract map site and the other project components. ~~the project and/or tract map sites.~~

Upon completion of the grading operations associated with soil import, additional work would be needed for mass grading of the development areas, along with fine grading for development pads. Mass grading would consist of rough grading operations for major roads and infrastructure, bank stabilization, Long Canyon Road Bridge, debris basins, water/wastewater facilities, and utility corridor, drainage patterns, and building pads for the various land uses within the ~~tract map project site~~. Remedial grading and custom grading may also be required depending upon future site-specific soils and geological investigations.¹³ Graded slopes would be landscaped and irrigated pursuant to County grading and erosion control requirements.

Utility installation involves earthwork such as excavation of trenches and stockpiling of soils. Earthwork volume estimates for each of the utilities ~~are provided~~ is broken down below:

- Up to 182,000 cubic yards for the potable water system;
- Up to 800,000 cubic yards for the sanitary sewer system;
- Up to 50,000 cubic yards for installation of dry utilities including electrical and natural gas;
- Up to 92,000 cubic yards for construction of the debris basins; and
- Up to 88,000 cubic yards for the Zone 1A water tank site.

¹³ Geotechnical conditions requiring remediation may include settlement and seismic conditions. Please refer to **Section 4.1, Geotechnical and Soil Resources**, of this EIR for a detailed discussion of potential grading impacts and related mitigation.

The total volume of earthwork, inclusive of the utility installation/corridor, is estimated at up to 7 million cubic yards.

The project-related grading also may occur in several phases, including partial remedial grading within the tract map site prior to the transport of off-site materials from Adobe Canyon. This phased remedial grading may include removal and re-compaction of existing soils within the tract map site without any substantial changes in existing elevations and/or removal of soils within certain areas and compaction of these soils at a higher elevation in another location within the tract map site creating a temporary low area to be filled at a later date with imported materials. Both the elevated compacted and low areas created by this phased grading must be protected from flooding in accordance with current County standards. Flood protection may include permanent buried bank stabilization or a temporary coating such as gunite or turf reinforced mat.

As part of the grading within the first phase of the tract map, a temporary, emergency vehicle access road would be installed for use by the Los Angeles County Fire Department. The temporary road would be gated and allow access to and from SR-126 on the ~~northwest~~-northeast side of the tract map site, connecting to the east end of "X" Drive and is depicted on Figure 1.0-23.

(t) Sound Walls

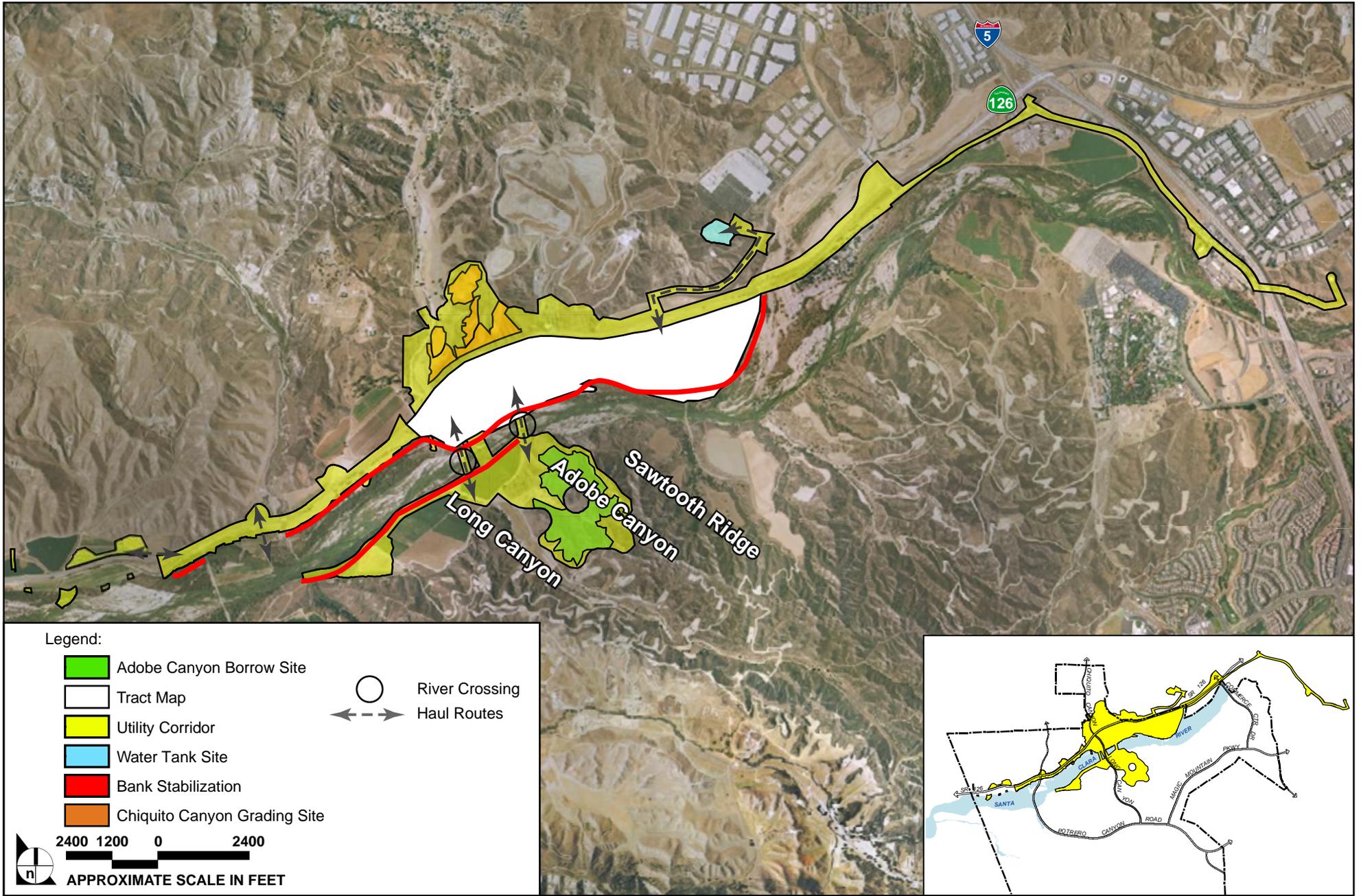
The applicant proposes to construct sound walls of varying heights within the Landmark Village tract map site along SR-126. The locations and heights of these walls are described and illustrated in **Section 4.8, Noise**, of this EIR.

(2) Economic Characteristics

(a) Fiscal Considerations

The Specific Plan included a fiscal impact analysis, which showed that implementation of Newhall Ranch would result in a favorable fiscal impact on Los Angeles County and the City of Santa Clarita. After funding all essential local governmental services, annual surpluses were projected to both the County and City.¹⁴ In addition, the Specific Plan analyzed the population, housing, and employment effects of the Specific Plan on the local and regional environment. As approved, the Specific Plan was found to be consistent with the population, housing, and employment projections of the County of Los Angeles General Plan and the Santa Clarita Valley Area Plan. In addition, the approved Specific Plan was found

¹⁴ For further information, please refer to Section 6.0, Fiscal Impacts, of the Newhall Ranch Specific Plan Program EIR and the related fiscal impacts study (**Appendix 6.0**).



SOURCE: Impact Sciences, Inc. – May 2010

(Revised) FIGURE 1.0-33

Off-Site Tract Map Improvements

to be consistent with the Southern California Association of Governments' (SCAG) adopted population, housing, and employment forecasts for the Santa Clarita Valley and the region.¹⁵

(b) Public Services

Using data provided by the County of Los Angeles, Department of Regional Planning, the average household size is as follows: single-family units (308), 3,173.23 persons per household, and multi-family units (1,136), 2,382.11 persons per household. Therefore, the residential component of the Landmark Village project would result in a previously planned and approved population of approximately 3,680,392 persons ($308 \times 3,173.23 = 976,995$; $1,136 \times 2,382.11 = 2,704,376$; $976,995 + 2,704,376 = 3,680,392$).

¹⁵ For further information, please refer to Section 4.21, Population, Housing, and Employment, of the Newhall Ranch Program EIR.

The County of Los Angeles would provide public services to the project site. This would include police and fire service, flood control, library, public park and trails maintenance and wastewater service. However, approval of such services to the entire Specific Plan site was considered by the County in adopting the Newhall Ranch Specific Plan. As contemplated, the project residents and businesses would generate revenue in the form of sales taxes, property taxes, fees, etc., which would be available to the County to fund public services on the site (e.g., fire and police service, flood control, library service, street maintenance, and wastewater treatment). Revenues for capital improvements would also be generated by the project directly through various forms of development fees, including, but not limited to, fire facilities fees, water connection fees, wastewater connection fees, and school and library fees. Financing mechanisms for needed infrastructure improvements and supporting public service facilities could include private financing, assessment districts, landscape maintenance districts, fee districts, Mello-Roos districts, and bridge and thoroughfare fees.

(c) Affordable Housing

Section 3.10 of the adopted Newhall Ranch Specific Plan includes an Affordable Housing Program that provides for the direct inclusion of very low, low, and moderate income affordable housing opportunities within the Specific Plan area. At buildout, a total of 2,200 affordable dwelling units would be provided. The Affordable Housing Program includes timing mechanisms and monitoring provisions to ensure that affordable housing is provided concurrent with market rate housing. The applicant is required to identify the number and location of affordable housing units as a condition of tentative or final map approval.

Approximately 296 units located in the Medium Residential, ~~High Residential~~, and Mixed Use land use categories would be set aside as affordable within the tract map site.

(3) Environmental Characteristics

Environmental characteristics associated with the entire buildout of the Specific Plan were thoroughly addressed by the County in the certified Newhall Ranch Specific Plan Program EIR; however, such characteristics are further analyzed at the project level for the Landmark Village project in this EIR.

b. Implementation of Smart Growth Principles

There are many different components that make a community sustainable or qualify it as a "smart growth" project. These include a proper mix of land use, provision of jobs, design for future transit uses in the plan, provision of open space and recreation, connectivity (trails), preservation of natural areas, the reduction of impermeable surfaces, water conservation and re-use, energy conservation, potentially including the use of alternative energies (solar, wind, cogeneration, etc.), and the incorporation of green building techniques. As is evidenced below, Landmark Village, as with Newhall Ranch, incorporates the components of a sustainable or smart growth community.

Newhall Ranch Specific Plan, as long as the Specific Plan remains in effect as to that area. The proposed Landmark Village project is the first development phase of the Newhall Ranch Specific Plan.

b. Local Setting

As illustrated in **Figure 1.0-3, Project Boundary/Environmental Setting**, the 292.6-acre Landmark Village tract map site is generally located due west of the confluence of Castaic Creek with the Santa Clara River. The northern bank of the Santa Clara River forms the southern boundary of the tract map site, and State Route 126 (SR-126) defines the tract map site's northern boundary. The eastern boundary abuts Castaic Creek. The City of Santa Clarita is located east of the site just beyond Interstate 5 (I-5), approximately 1 mile from the tract map site.

A series of improvements located off site of the Landmark Village tract map site are required to support proposed uses. A description of the local setting for each off-site improvement is described below and illustrated on **Figure 1.0-3**.

As shown on **Figure 1.0-3**, the Adobe Canyon borrow site is located in the northeastern central portion of the approved Newhall Ranch Specific Plan, just south of the Santa Clara River and adjacent to Long Canyon. The Adobe Canyon borrow site, located within the approved Newhall Ranch Specific Plan, would be used to import-export fill from that borrow site to the Landmark Village tract map site. Off-site grading also is required in the low-lying hills north of SR-126, east of Chiquito Canyon Road, and within and adjacent to the banks of the Santa Clara River at and downstream of the tract map site (Chiquito Canyon grading site). This site would be graded to accommodate roadway improvements to SR-126, and debris basins for stormwater flows collected by the tract map's storm drainage system. All of these improvements are proposed on unimproved land within the approved Newhall Ranch Specific Plan.

The proposed project also would require a water delivery system. As shown on **Figure 1.0-29, Landmark Village Potable Water System Infrastructure**, the proposed water delivery system consists of one new water tank and three pressure regulating stations connected to a network of 18- to 20-inch water mains that generally follow the southern right-of-way for SR-126 and major roadways. A network of 8-inch lines located within the planned roadway network would distribute the water for connection to laterals located on individual lots.

A single water pressure zone (Zone 1A) overlies the project site, and is supplied potable water via the three pressure regulating stations from Zone 1 that will provide all the potable water supply for the system serving Zone 1A, which contains the proposed Landmark Village VTTM No. 53108. Pressure Zone 1 serves uses at an elevation of less than 1,160 feet above mean sea level (MSL) and is comprised of

three existing storage tanks with a combined storage capacity of 8.3 million gallons and numerous sources of supply consisting of existing groundwater wells and CLWA turnouts.

For reclaimed water storage, the Round Mountain Tank, which is currently used for potable water, would be converted to a reclaimed water tank, with reclaimed water lines to serve the tract map site. The setting for each tank site (new potable and Round Mountain) is illustrated on **Figure 1.0-3**.

Finally, **Figure 1.0-3** depicts the utility corridor area. The utility corridor would house various utilities needed to serve the Landmark Village tract map site, including water/reclaimed water lines, sewer lines, telephone/cable lines, and other utilities. The corridor extends from the Landmark Village tract map site and travels within the existing roadway rights-of-way for SR-126, Henry Mayo Drive, The Old Road, and Wolcott Road. The utility corridor extends west along the southern edge of the SR-126 right-of-way to the site of the approved Newhall Ranch Water Reclamation Plant (WRP), and to the east where it travels along SR-126 to Henry Mayo Drive until reaching The Old Road; whereupon, the alignment turns south to Round Mountain. Franklin Parkway and Wolcott Way is also used for utility service to Landmark Village. Electric power, telephone, cable television, and water are brought across SR-126 to the Landmark Village project from the existing terminus of these utilities near the post office site approximately 3500 feet east of Wolcott Way.

Surrounding land uses are described in detail in the Newhall Ranch Specific Plan Program EIR.

c. Public Services

The Newhall Ranch Specific Plan Program EIR addressed the public services required to implement the approved Newhall Ranch Specific Plan. Such services are discussed in this EIR in the context of the proposed Landmark Village project. For example, Valencia Water Company is identified as the local retail water purveyor for the proposed Landmark Village tract map site. Please refer to this EIR, **Section 4.10, Water Service**, for additional information regarding water supply and demand and related issues.

In addition, the Newhall Ranch Specific Plan Program EIR provided a complete description of wastewater disposal, police and fire protection services, area school districts, library services, and park and recreation facilities for the entire Newhall Ranch Specific Plan. Such services are discussed below in the context of the proposed Landmark Village tract map site.

As to the proposed Landmark Village tract map site, there are two options for treatment and disposal of wastewater generated by on-site uses. One option involves connection to the existing wastewater facilities of the Santa Clarita Valley Joint Sewage System (SCVJSS), which consists of an interconnected

chaparral and coastal sage scrub. Similarly, potable water tank construction is planned on disturbed land, containing non-native grasslands and coastal sage scrub. Vacant land found along the Santa Clara River characterizes the site of the proposed Long Canyon Road Bridge, bank protection, and the reclaimed water tank site (see **Figure 2.0-1, Existing Land Use**).

(1) Geotechnical Resources

The Landmark Village site, including related off-site improvements, is located within the tectonically active Transverse Ranges of Southern California and the utility corridor is cut by a segments of the potentially active Del Valle and Salt Creek Faults. However, there is no known direct evidence of Holocene activity on the Del Valley Fault; therefore, the fault is not within an Alquist-Priolo special studies zone. Bedrock formations found on the ~~study-project~~ area include the Pico and Saugus Formations. Surficial deposits include quaternary alluvium and older alluvium along with artificial fill.

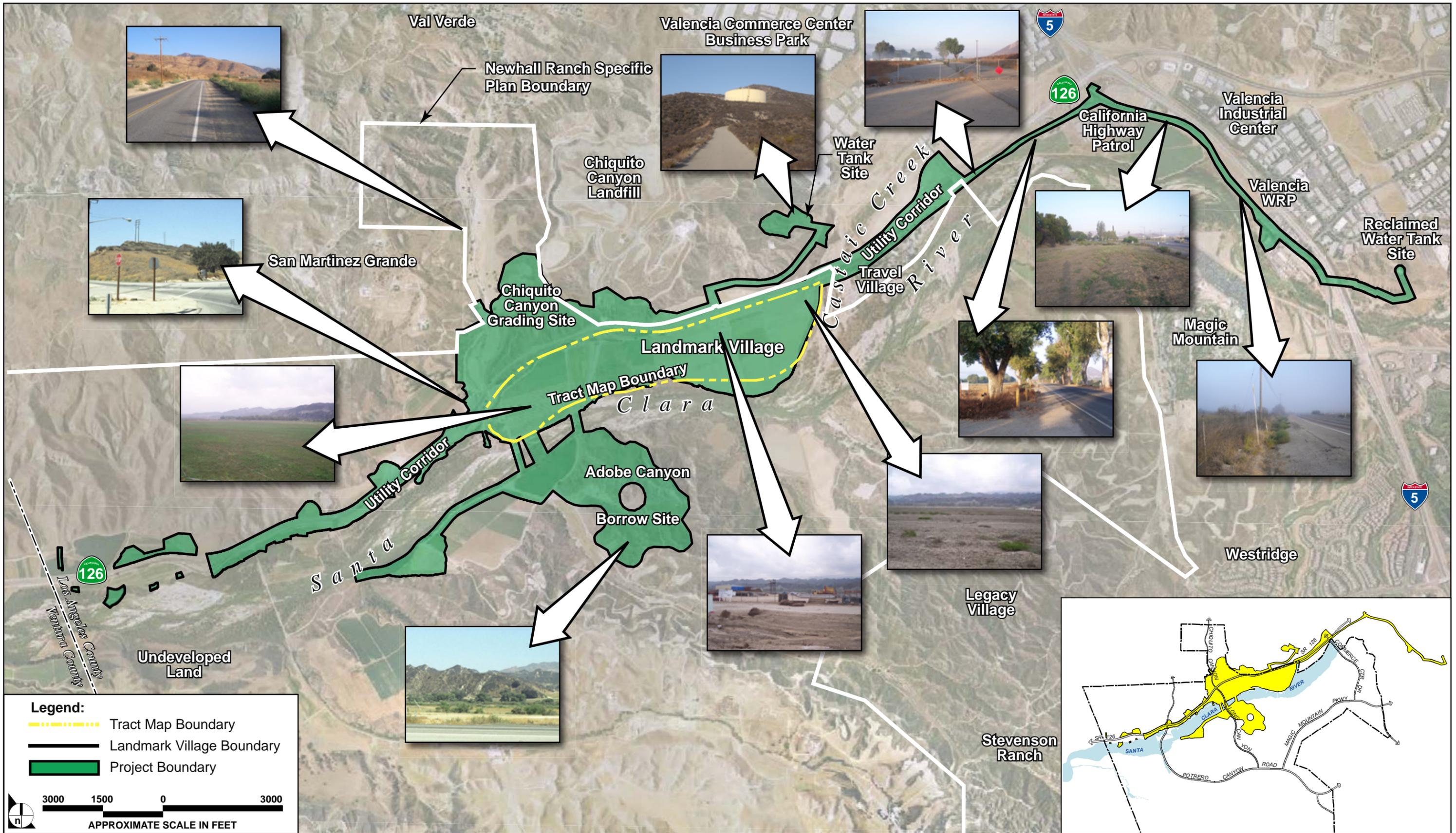
As shown on **Figure 2.0-2, Mineral Resource Zones**, the Landmark Village site and related off-site improvements are also underlain by mineral and gravel deposits. The California Department of Conservation, Division of Mines and Geology, categorizes the tract map site as a Mineral Resource Zone (MRZ-2). This zone indicates that information exists, which identifies a substantial deposit of mineral and/or gravel resources in this area. Please refer to **Section 4.1, Geotechnical and Soil Resources**, for additional information on existing geotechnical and soil resources on the Landmark Village site.

(2) Biology

The proposed Landmark Village tract map site is disturbed by historic and ongoing agriculture activity; however, existing sensitive biological resources and habitat types occur on the project site and within its vicinity. On-site vegetation communities vary depending upon their location on the project site. In addition to disked farm fields, habitat communities include, among others, non-native grassland, upland scrub habitat and sensitive riparian habitat located primarily in areas adjacent to and within the Santa Clara River to the south of the project site.

The Adobe Canyon borrow site is generally in an undeveloped state with the exception of a few access roads for oil well drill pads. This site is dominated by coastal sage scrub, but also includes areas of coastal sage chaparral scrub, non-native grassland, and live oak woodland. Portions of Long Canyon and the lower portion of Adobe Canyon have been used for agricultural purposes. Dumped fill associated with past oil well drilling activities exists at various locations within the Adobe Canyon borrow site.

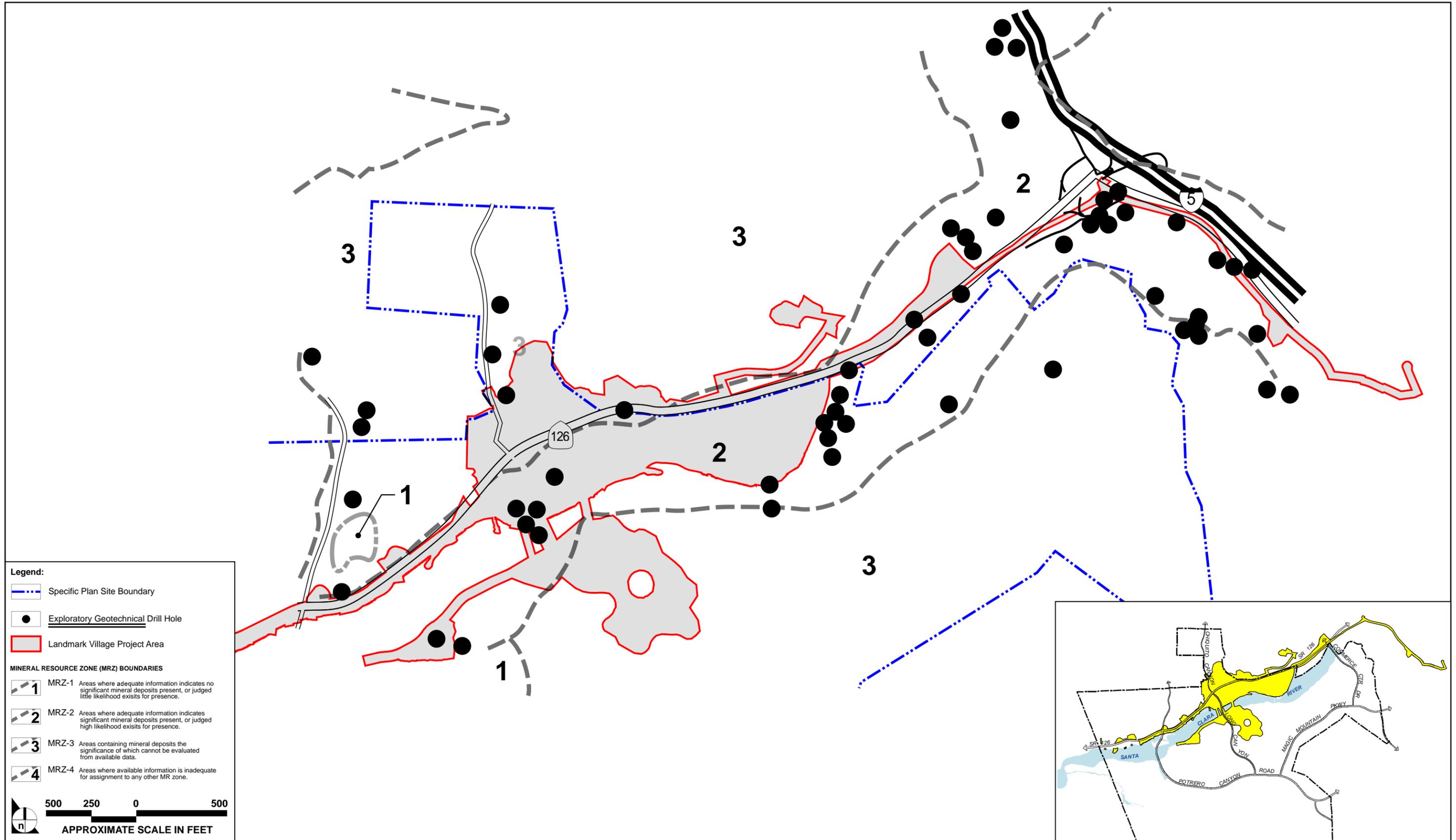
The Chiquito Canyon grading site is characterized by non-native grassland, coastal sage scrub vegetation, and agricultural/disturbed areas. The land is generally in an undeveloped state with the exception of a few access roads for oil well drill pads. Dumped fill associated with past oil well drilling activities is present at the eastern portion of the site. A Southern California Edison easement traverses the northern



SOURCE: Impact Sciences, Inc. – February 2008

(Revised) FIGURE 2.0-1

Existing Land Use



SOURCE: California Department of Conservation, Division of Mines and Geology; Mineral Land Classification Map, Aggregate Resources Only, 1987.

(Revised) FIGURE 2.0-2

Mineral Resource Zones

The 50-year capital floodplain (as defined by the Flood Control Division of the Los Angeles County Department of Public Works) of the Santa Clara River is located on the Landmark Village project site. The reach of the Santa Clara River within the Specific Plan site has year-round low flows created primarily by tertiary-treated effluent discharge from the Valencia WRP. Natural flows in the river only occur in the winter due to storm runoff. The flows vary significantly from year to year. In addition, there can be short-term releases from Castaic Lake during summer months that reach the river via Castaic Creek, which joins the river at the Specific Plan site.

Beneath the surface of the Landmark Village site and related off-site improvements, ground water is found within the Alluvial aquifer and the deeper Saugus Formation. The Newhall Ranch Specific Plan Program EIR provides a thorough description of the drainages in the Landmark Village area. Additionally, please refer to **Section 4.2, Hydrology**, and **Section 4.5, Floodplain Modifications**, for additional information on the drainage characteristics of the Landmark Village project site, including related off-site improvements.

(5) Cultural Resources

The Pico and Saugus Formations, which exist within the ~~study-project~~ area, are known to have a high-to-moderate potential for yielding paleontological resources. One prehistoric archaeological site exists within the boundary of the Landmark Village Vesting Tentative Tract Map No. 53108 (CA-LAN-2234). A subsequent Phase II investigation concluded that CA-LAN-2234 represented introduced fill used for erosion control that was artifact bearing. It appeared to be derived from the nearby site CA-LAN-2233 located north of SR-126 outside the ~~study-project~~ area and did not represent an extant archaeological site. Please refer to this EIR, **Section 4.22, Cultural/Paleontological Resources**, for additional information on the archaeological and paleontological resources found on the Landmark Village tract map site and related off-site improvement locations.

(6) Noise

The Newhall Ranch Specific Plan Program EIR provided a detailed assessment of noise issues associated with Specific Plan development. Specific point sources of noise in the Landmark Village study area include ~~SR-126~~, the Chiquita Canyon Landfill, the Travel Village Recreational Vehicle (RV) Park, Valencia Commerce Center Business Park, and the Valencia WRP. The mobile noise from SR-126 is generated from vehicular traffic. Magic Mountain Theme Park is too distant from the project site to provide a point noise source to the Landmark tract map site. Most of the noise at the Chiquita Canyon Landfill is generated by

developers, and public agencies when considering development plans for an area. A specific plan is a substitute for standard zoning and is used to address the unique qualities of a particular property.

The proposed Landmark Village project represents the first subdivision map filed within the approved Newhall Ranch Specific Plan. All development constructed within the Specific Plan area is subject to development standards for grading and drainage, trails and walkways, landscaping, building mass, building density, setbacks, lighting, and fencing. These standards are enforced during the County of Los Angeles project review and plan check process. An analysis has been prepared which demonstrates the consistency of the proposed Landmark Village project with the approved Newhall Ranch Specific Plan and can be found in Recirculated Draft EIR **Appendix 2.0**.

The Newhall Ranch Specific Plan is divided into distinct villages based on natural landmarks and topographic features. The project site is located within Riverwood Village portion of the Specific Plan, which is that area located north of the Santa Clara River and south of SR-126. As illustrated on **Figure 2.0-4, Existing Specific Plan Land Use Designations**, the Landmark Village tract map site is designated as Low-Medium Residential (LM), Medium-Residential (M), Commercial (C), and Mixed-Use (MU) development. Surrounding land use designations include the River Corridor SMA/SEA 23, which abuts the southern boundary of the project site, while Mixed-Use and Business Park uses are found north of SR-126 opposite the project site.

The Low Medium Residential designation allows both attached and detached homes. The minimum lot size is 2,500 square feet with a minimum front yard setback set at 18 feet. A 5-foot minimum side yard setback applies to detached product, while attached units may have a zero lot line subject to certain criteria.

The Medium Residential designation allows a variety of housing types including small lot, single-family detached and attached units along with multi-family homes. The minimum lot size for a detached home is 2,500 square feet, with a minimum front yard setback of 18 feet and side yard setback of 5 feet. There is no minimum lot size for the attached homes under this category, although a 10-foot front yard setback does apply.

The Commercial land use designation permits maximum site coverage of 50 percent with a minimum front setback of 20 feet. Building height is restricted to a maximum of 45 feet. Mixed-Use designations are more permissive, and contain no maximum site coverage requirements and no minimum front setbacks. Building height is restricted to a maximum of 55 feet.

Development standards also apply for major open areas such as the River Corridor SMA/SEA 23 that abuts the southern Landmark Village project boundary. A required setback applies from the property

Table 2.0-1
Newhall Ranch Specific Plan
Maximum Allowed Land Use by Type-Project Planning Areas

Planning Area	Residential*		Mixed-Use* and Commercial	
	Gross Acres	Maximum Units	Gross Acres	Max Sq. Ft.
RW-27	--	--	27.8	594,000
RW-29	--	--	25	475,500
RW-30	--	--	12.5	283,500
RW-31	26.5	456	--	--
RW-32	14.1	302	--	--
RW-33	39.5	600	--	--
RW-34	118.5 <u>116.6</u>	801	--	--
RW-35	--	--	15.6	196,500
RW-36 ¹	--	--	6.7	
TOTAL	198.6 <u>196.7</u>	1,444*	87.6	1,549,500

* Although the number of units in the column exceeds 1,444, the total approved number of units is capped. The approval of extra units in the various planning areas only allows for greater flexibility in the overall land plan. However, the total number of residential units within the Planning Areas RW-27 and RW-29 through RW-34 shall not exceed 1,444 dwelling units according to footnote 3 of Table 5.4-1 "Annotated Land Use Plan Statistical Table" of the Newhall Ranch Specific Plan.

¹ This area is identified as a potential site for a transit station.

To assess the Landmark Village project's consistency with the policies and objectives of the approved Newhall Ranch Specific Plan, please refer to Recirculated Draft EIR **Appendix 2.0**. Based on the Specific Plan compliance/consistency analysis found in this EIR, it can be determined that the Landmark Village project is consistent with the adopted policies and objectives of the Newhall Ranch Specific Plan. The Los Angeles County Regional Planning Commission and Board of Supervisors will conduct discretionary review of the Landmark Village project's consistency with the approved Specific Plan.

c. Castaic Area Community Standards District

The Castaic Area CSD defines the Castaic area of influence within Los Angeles County and describes the development standards governing growth within the Castaic area community. The Castaic CSD was approved by the Los Angeles County Board of Supervisors in December 2004, and was established to protect the rural character, unique appearance, and natural resources of the Castaic area communities. The CSD also ensures that new development will be compatible with the Castaic area's existing neighborhoods and with the goals of the Santa Clarita Valley Area Plan. Finally, the CSD promotes the establishment of trucking-related businesses in locations where trucking activities presently occur, while ensuring that the trucking businesses do not interfere with the community's residential character,

circulation, and traffic patterns. The CSD generally includes the existing communities of Castaic, Castaic Junction, Val Verde, Hasley Canyon, Hillcrest, and Paradise Ranch; the canyons of Charlie, Tapia, Romero, Sloan, and Violin; the Valencia Commerce Center; the Peter Pitchess Detention Center; the Northlake development and part of the Newhall Ranch development, both of which are governed by specific plans.

The Castaic Area CSD does not apply to areas within the CSD boundary governed by a specific plan or development agreement that was approved prior to the effective date of the CSD, as long as such specific plan or development agreement is legally valid and has not terminated. In this instance, the Castaic Area CSD recognizes that the Newhall Ranch Specific Plan area will be governed by the Specific Plan, including any amendments thereto; and, therefore, is exempt from the provisions of the Castaic Area CSD.

d. Regional Plans and Policies

Regional planning considerations and federal air and water quality laws have increased the relative importance of land use planning in a regional context. Southern California Association of Government's (SCAG's) ~~Regional Comprehensive Plan and Guide (RCPG) includes a Land Use and Housing and Economy Growth Management Regional Transportation Plan chapter that (RTP)~~ provides the demographic forecasts used in the South Coast Air Quality Management District's (SCAQMD's) *Air Quality Management Plan* (AQMP) and that provides a flexible framework to resolve growth-related issues expected in the future. ~~The RCPG's Growth Forecasting Chapter and the Regional Housing Needs Assessment Chapter were both updated in 2002, after the Newhall Ranch Specific Plan Program EIR was originally certified.~~ In addition, SCAQMD released a new AQMP in 2007³. Any variation or new information prompted by the update in plans is reflected in the summaries and in the several sections in this EIR impacted by these updates.

In addition to the plans discussed above, the Landmark Village area is subject to the *Water Quality Control Plan (Basin Plan) [for the] Los Angeles Region (4)* of the California Regional Water Quality Control Board and the *Congestion Management Program (CMP)* of the Metropolitan Transportation Authority. The CMP was updated in 2002⁴, and therefore any new impacts or information prompted by this update, which occurred after the original certification of the Newhall Ranch Specific Plan Program EIR, will be discussed in **Section 4.7, Traffic/Access**. The Newhall Ranch Specific Plan Program EIR addressed all four of these plans, and is incorporated by reference here, to the extent that they are pertinent.

The Landmark Village tract map site is also subject to state laws and regulations regarding water supply. The Newhall Ranch Specific Plan Program EIR addressed the Specific Plan's consistency with these water

supply laws and regulations. Please refer, specifically, to the Newhall Ranch Revised Additional Analysis, Volume VIII, May 2003, Section 2.5, Water Resources, which is available for public review and inspection at the County of Los Angeles, Department of Regional Planning, 320 W. Temple Street, 13th Floor, Los Angeles, California, and is incorporated by this reference.

The RTP and Compass Growth Vision RCPG, AQMP, Basin Plan, CMP, and water supply laws and regulations are summarized below, along with an analysis of the proposed project's consistency with the goals and policies of these plans, programs, laws, and regulations.

**(1) ~~Regional Comprehensive Plan and~~ Transportation Plan and Compass Growth Vision
Guide**

The analysis below assesses the consistency of the proposed project with SCAG's RTP and Compass Growth Vision (CGV) goals, policies and principles.

~~The RCPG consists of five Core Chapters, which are Growth Management, Regional Mobility, Air Quality, Water Quality, and Hazardous Waste Management. These Core Chapters respond directly to federal and state requirements placed on SCAG, with the exception of the Hazardous Waste Management Chapter, and contain mandatory requirements for cities and counties, as well as for projects of regional significance, such as Landmark Village. Under CEQA, local governments must use these requirements as the basis for determining the consistency of local projects of regional significance with the applicable regional plans. SCAG's most recent population, household, and employment forecasts for the North Los Angeles County Council of Governments (NLACOG) subregion are contained in the 2001 Regional Transportation Plan (RTP) (published in April 2001).~~

~~The following is a brief discussion of the mandatory sections of the Core Chapters that apply to the proposed project. The Hazardous Waste Management Core Chapter is designed to assist the region's counties and cities in their efforts to plan for current and future hazardous waste management requirements, and it is not applicable at the individual project level; therefore, it is not discussed below. In addition to the Core Chapters, applicable policies of the Open Space Chapter are discussed below.~~

Table 2.0-2
SCAG Regional Transportation Plan Goals and Compass Growth Visioning Principles

Regional Transportation Plan Goals		
Goals/Principle Number	Policy Text	Statement of Consistency, Non-Consistency, or Not Applicable
<u>RTP G1</u>	<u>Maximize mobility and accessibility for all people and goods in the region.</u>	<u>Consistent: The Landmark Village project would result in no significant impacts to circulation or traffic issues, with implementation of mitigation measures. The proposed project would not create any impacts to intersection that could not be mitigated below a level of significance.</u>
<u>RTP G2</u>	<u>Ensure travel safety and reliability for all people and goods in the region.</u>	<u>Not Applicable: The goal to ensure safety of travel and reliability for all people and good in the region is the responsibility of local government.</u>
<u>RTP G3</u>	<u>Preserve and ensure a sustainable regional transportation system.</u>	<u>Not Applicable: the goal to preserve and ensure a sustainable regional transportation system is the responsibility of local government.</u>
<u>RTP G4</u>	<u>Maximize the productivity of our transportation system.</u>	<u>Consistent: The Landmark Village project would result in no significant impacts to circulation or traffic issues, with implementation of mitigation measures. The proposed project would not create any impacts to intersection that could not be mitigated below a level of significance.</u>
<u>RTP G5</u>	<u>Protect the environment, improve air quality, and promote energy efficiency.</u>	<p><u>Consistent: The Landmark Village incorporates 436 applicable and proposed mitigation measures directly intended to improve the environment. Of these mitigation measures, 22 are directly responsible to assist in mitigation air quality impacts. While the proposed project does not fully mitigate impacts to air quality its emissions, the project would not jeopardize attainment of state and federal ambient air quality standards in the Santa Clarita Valley and the region.</u></p> <p><u>The adopted air quality mitigation measures for project would help to reduce VMT (and related air emissions) associated with the on-site employment-generating uses. The proposed project promotes energy efficiency as is demonstrated by Mitigation Measures LV 4.23-1 and 4.23-2 requiring all new residential and nonresidential development on the Landmark Village site would be at least 15 percent more energy efficient than the existing standards adopted by the CEC in Title 24.</u></p>

Regional Transportation Plan Goals		
Goals/Principle Number	Policy Text	Statement of Consistency, Non-Consistency, or Not Applicable
<u>RTP G6</u>	<u>Encourage land use and growth patterns that complement our transportation investments and improves the cost-effectiveness of expenditures.</u>	<p><u>Consistent: Landmark Village would include a park-and-ride lot. In addition, various mitigation measures adopted in connection with the Newhall Ranch Specific Plan would accomplish the goals identified in the recommended reduction strategy by facilitating and providing incentives for ride-sharing efforts. The Los Angeles County Metropolitan Transportation Authority also has over 100 conveniently located park-and-ride locations countywide, and sponsors a subsidized metro vanpool program. (See http://www.metro.net/riding_metro/commute_services/vanpool/default.htm.) Therefore, the proposed project would further implementation of this reduction strategy. Furthermore, Landmark Village would incorporate bike lanes and routes into the street system. The Newhall Ranch Specific Plan's regional river trails allow for bicycle use and reduces the number of times that bicycles would interact with motor vehicles. (The regional river trails span from the Los Angeles County line into the City of Santa Clarita.) Therefore, the proposed project would further implementation of this reduction strategy.</u></p> <p><u>Lastly, the land use and circulation plans for Landmark Village have been designed to minimize car trips and reduce GHG emissions. Accordingly, mass transit would be conveniently located through the development of a new transit station, a park-and-ride lot, and bus stops. In addition, an approximate 5-mile right-of-way for a potential Metrolink extension also is included in the circulation plan. Trails and bike paths leading to close-to-home jobs, neighborhood serving retail, and the elementary school would encourage residents to enjoy the walkability of the community. Finally, the project applicant has committed to funding \$300 million in roadway improvements in the Santa Clarita Valley for transportation mobility. Therefore, the proposed project would further implementation of this reduction strategy.</u></p>

<u>Regional Transportation Plan Goals</u>		
<u>Goals/Principle Number</u>	<u>Policy Text</u>	<u>Statement of Consistency, Non-Consistency, or Not Applicable</u>
<u>RTP G7</u>	<u>Maximize the security of our transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies</u>	<u>Not Applicable: The security of the transportation system, rapid recovery monitoring, and coordination of other security agencies is the responsibility of the City of Santa Clarita, other state agencies, and the transportation service providers.</u>

<u>Regional Transportation Plan Goals</u>		
<u>Goals/Principle Number</u>	<u>Policy Text</u>	<u>Statement of Consistency, Non-Consistency, or Not Applicable</u>
<u>Compass Growth Visioning</u>		
<u>Principle 1: Improve mobility for all residents</u>		
<u>GV P1.1</u>	<u>Encourage transportation investments and land use decisions that are mutually supportive.</u>	<p><u>Consistent: --Landmark Village would include a park-and-ride lot. In addition, various mitigation measures adopted in connection with the Newhall Ranch Specific Plan would accomplish the goals identified in the recommended reduction strategy by facilitating and providing incentives for ride-sharing efforts.</u></p> <p><u>The land use and circulation plans for Landmark Village have been designed to minimize car trips and reduce GHG emissions. Accordingly, mass transit would be conveniently located through the development of a new transit station, a park-and-ride lot, and bus stops. In addition, an approximate 5-mile right-of-way for a potential Metrolink extension also is included in the circulation plan. Trails and bike paths leading to close-to-home jobs, neighborhood serving retail, and the elementary school would encourage residents to enjoy the walkability of the community. Finally, the project applicant has committed to funding \$300 million in roadway improvements in the Santa Clarita Valley for transportation mobility. Therefore, the proposed project would further implementation of this reduction strategy.</u></p>

Regional Transportation Plan Goals		
<u>Goals/Principle Number</u>	<u>Policy Text</u>	<u>Statement of Consistency, Non-Consistency, or Not Applicable</u>
<u>GV P1.2</u>	<u>Locate new housing near existing jobs and new jobs near existing housing.</u>	<p><u>Consistent: Landmark Village, along with the other villages in Newhall Ranch, will include a broad range of housing types, including affordable housing, along with commercial, office, and public facilities. As to Landmark Village, a diverse range of 1,444 homes (308 single-family and 1,136 multi-family units) would be provided. To minimize and shorten vehicle trips, most homes will be within walking distances to the Landmark Village community’s commercial and mixed-use areas, elementary school site, community park, and trail system. Finally, Landmark Village is located adjacent to the Valencia Commerce Center, one of the largest employment centers in the Santa Clarita Valley. Bike and pedestrian trails within Newhall Ranch and Landmark Village will connect to trails within the Valencia Commerce Center.</u></p> <p><u>Given that the project locates new housing near existing jobs and new jobs in the commercial and retail uses proposed for the site that would most likely be employed by residents of Landmark Village and existing residents of the Santa Clarita Valley, it is the County’s belief that the proposed project meets the intent of GV P1.2.</u></p>
<u>GV P1.3</u>	<u>Encourage transit-oriented development.</u>	<p><u>Consistent: Newhall Ranch, including Landmark Village, will be part of the Santa Clarita Transit system and will pay its fair share for transit service to the community. Transit improvements within Newhall Ranch will include a park-and-ride lot, a future transit station, transfer station, bus stops, and preservation of light rail right-of-way. Landmark Village will include a total of five bus stops, a park-and-ride lot, and the preservation of light rail right-of-way along SR-126. The provision of transit and the accommodation of light rail encourage residents to rely less on vehicular travel.</u></p>

<u>Regional Transportation Plan Goals</u>		
<u>Goals/Principle Number</u>	<u>Policy Text</u>	<u>Statement of Consistency, Non-Consistency, or Not Applicable</u>
<u>GV P1.4</u>	<u>Promote a variety of travel choices.</u>	<p><u>Consistent: To minimize and shorten vehicle trips, most homes will be within walking distances to the Landmark Village community’s commercial and mixed-use areas, elementary school site, community park, and trail system. Finally, Landmark Village is located adjacent to the Valencia Commerce Center, one of the largest employment centers in the Santa Clarita Valley. Bike and pedestrian trails within Newhall Ranch and Landmark Village will connect to trails within the Valencia Commerce Center.</u></p> <p><u>Transit improvements within Newhall Ranch will include a park-and-ride lot, a future transit station, transfer station, bus stops, and preservation of light rail right-of-way. Landmark Village will include a total of five bus stops, a park-and-ride lot, and the preservation of light rail right-of-way along SR-126. The provision of transit and the accommodation of light rail encourage residents to rely less on vehicular travel.</u></p>
<u>Principle 2: Foster livability in all communities</u>		
<u>GV P2.1</u>	<u>Promote infill development and redevelopment to revitalize existing communities.</u>	<u>Not Consistent: The proposed project is not an infill development, and is not surrounded on all sides by existing development.</u>
<u>GV P2.2</u>	<u>Promote developments that provide a mix of uses.</u>	<u>Consistent: The Landmark Village project would include a broad range of housing types and nonresidential uses. Within the project site, many residents will be located within walking distances to commercial and mixed-use areas, schools, community parks, and trails. In addition, as Landmark Village is adjacent to the Valencia Commerce Center, bike and pedestrian trails within Newhall Ranch would connect to trails within the Valencia Commerce Center. Therefore, the proposed project would further implementation of this reduction strategy</u>
<u>GV P2.3</u>	<u>Promote “people scaled,” pedestrian-friendly (walkable) communities.</u>	<u>Consistent: Within the project site, many residents will be located within walking distances to commercial and mixed-use areas, schools, community parks, and trails. The trails and walkways would provide connectivity to the living, shopping, work, entertainment, office, park, and recreation facilities throughout the project site.</u>

Regional Transportation Plan Goals		
Goals/Principle Number	Policy Text	Statement of Consistency, Non-Consistency, or Not Applicable
<u>GV P2.4</u>	<u>Support the preservation of stable, single-family neighborhoods.</u>	<u>Not Applicable: There are currently no existing single-family neighborhoods adjacent to the project.</u>
Principle 3: Enable prosperity for all people		
<u>GV P3.1</u>	<u>Provide, in each community, a variety of housing types in each community to meet the housing needs of all income levels.</u>	<u>Consistent: The proposed project would provide a mix of housing types (single-family, multi-family, apartments) that would accommodate households with varied income levels.</u>
<u>GV P3.2</u>	<u>Support educational opportunities that promote balanced growth.</u>	<u>Consistent: The proposed project includes an elementary school to serve the residential dwellings.</u>
<u>GV P3.3</u>	<u>Ensure environmental justice regardless of race, ethnicity, or income class.</u>	<u>Not Applicable: This policy is the responsibility of the County of Los Angeles.</u>
<u>GV P3.4</u>	<u>Support local and state fiscal policies that encourage balanced growth.</u>	<u>Not Applicable: It is beyond the scope of the proposed project to support local and state fiscal policies encouraging balanced growth. Nonetheless, the proposed project would locate jobs and commercial services in close proximity to residential areas.</u>
<u>GV P3.5</u>	<u>Encourage civic engagement.</u>	<u>Not Applicable: This goal applies to governmental agencies.</u>
Principle 4: Promote sustainability for future generations		
<u>GV P4.1</u>	<u>Preserve rural, agricultural, recreational, and environmentally sensitive areas.</u>	<u>Consistent: The proposed project would not adversely impact environmental resources (wetlands, floodplains, threatened or endangered species and habitat, and water bodies supporting fish) and would provide an adequate corridor for the preservation and enhancement of the Santa Clara River, as described in the Recirculated Landmark Village Draft EIR.</u>
<u>GV P4.2</u>	<u>Focus development in urban centers and existing cities.</u>	<u>Consistent: The Santa Clarita Valley has been developing at a rapid pace for the past 10 years. Residential communities are located nearby (Westridge, Legacy V and Entrada) or the adjacent Mission Village site. Commercial/industrial uses are located to the north of the project site in the Commerce Center. Existing and planned development sites generally surround the project site.</u>

<u>Regional Transportation Plan Goals</u>		
<u>Goals/Principle Number</u>	<u>Policy Text</u>	<u>Statement of Consistency, Non-Consistency, or Not Applicable</u>
<u>GV P4.3</u>	<u>Develop strategies to accommodate growth that uses resources efficiently, eliminate pollution and significantly reduce waste.</u>	<u>Consistent: The land use and circulation plans for Landmark Village have been designed to minimize car trips and reduce GHG emissions. Accordingly, mass transit would be conveniently located through the development of a new transit station, a park-and-ride lot, and bus stops. In addition, an approximate 5-mile right-of-way for a potential Metrolink extension also is included in the circulation plan. Trails and bike paths leading to close-to-home jobs, neighborhood serving retail, and the elementary school would encourage residents to enjoy the walkability of the community.</u>
<u>GV P4.4</u>	<u>Utilize "green" development techniques.</u>	<u>Consistent: The project applicant has committed to exceed Title 24 energy efficiency standards by 15 percent for all residential and commercial buildings. Additionally, the applicant has committed to provide installation of one 2.0 kilowatt photovoltaic (i.e., solar) power system when undertaking the design and construction of each single-family detached residential unit on the project site and to the installation of one 2.0 kilowatt photovoltaic (i.e., solar) power system on each 1,600 square feet of nonresidential roof area provided on the project site (or equivalent).</u>

(a) — **Growth Management Chapter**

There are a number of policies in this chapter that refer to SCAG's mandates in the review of regionally significant projects. Those that are considered applicable to the Landmark Village project are discussed below.

Policy 3.01: — The population, housing, and job forecasts, which are adopted by SCAG's Regional Council and that reflect local plans and policies, shall be used by SCAG in all phases of implementation and review.

Analysis: — Based on SCAG's most recent forecasts, by the year 2025, the Los Angeles region is expected to grow to approximately 22.6 million people, representing 7.4 million household units and 9.9 million jobs. This growth represents a population increase of 34.5 percent, an increase in housing of 37.9 percent, and an increase in employment of 34.2 percent between the years 2000 and 2025. SCAG's distribution of regional growth was developed through the subregional planning process. Development of the proposed

~~project will accommodate an increase in population of about 3,680¹ persons and 1,444 housing units. The resultant increase in region wide population is planned and considered negligible. While the proposed project would not create significant or permanent employment opportunities, it would provide new housing in support of existing and new employment opportunities expected to occur in the Santa Clarita Valley. A detailed analysis of the project's consistency with the population and housing forecasts for the North Los Angeles County subregion and City of Santa Clarita is provided in the Newhall Ranch Specific Plan Program EIR. Also refer to **Section 4.9, Air Quality**, of this EIR for additional information on project consistency with demographic forecasts used when preparing the Air Quality Management Plan.~~

~~**Policy 3.03:** The timing, financing, and location of public facilities, utility systems, and transportation systems shall be used by SCAG to implement the region's growth policies.~~

~~**Analysis:** The proposed Landmark Village project represents the first phase of the Newhall Ranch Specific Plan, which contains backbone water, sewer, and drainage plans that generally identify the size and location of needed infrastructure. The proposed project would be developed over five years as part of Vesting Tentative Tract Map No. 53108, which represents the phasing mechanism used by the Specific Plan to identify the timing and sizing of necessary infrastructure.~~

~~Given the existence of the approved Specific Plan, and that the proposed project is located adjacent to existing infrastructure, Landmark Village would represent an orderly progression of development that would aid in implementing the region's growth policies. The proposed project would use various techniques currently available for financing and maintenance of public facilities, streets, and utilities. For example, the applicant could decide to finance the infrastructure and services necessary to serve the project through a Community Facilities District under the provisions of the Mello Roos Communities Facilities Act of 1982. Such a district is formed to finance designated public services and capital facilities by levying special taxes within the specific plan area.~~

~~While the exact financing method has not yet been decided, the County and the property owner/developer must mutually agree to the method and enter into an agreement reflecting the selected financing and maintenance method. As proposed, the project would be consistent with the region's growth policies.~~

¹ Based upon County of Los Angeles-provided estimates of 3.17 persons per single-family dwelling, 2.38 persons per multi-family dwelling and per apartment.

In addition to the mandatory goals of the Growth Management Chapter of the RCPCG, listed below are a number of non-mandatory goals used by SCAG. For example, the Growth Management Chapter includes a goal to improve the regional standard of living by developing urban forms that (1) enable individuals to spend less income on housing costs; (2) minimize public and private development costs; (3) enable firms to be more competitive; and (4) strengthen the strategic goal to stimulate the regional economy. Applicable policies related to this RCPCG goal include the following:

Policy 3.05: — SCAG shall encourage patterns of urban development and land use, which reduce costs on infrastructure construction and make better use of existing facilities.

Policy 3.09: — SCAG shall support local jurisdictions' efforts to minimize the cost of infrastructure and public service delivery, and efforts to seek new sources of funding for development and the provision of services.

Policy 3.10: — SCAG shall support local jurisdictions' actions to minimize red tape and expedite the permitting process to maintain economic vitality and competitiveness.

Analysis: — The Landmark Village site is located near existing urban uses that are supported by a full complement of roadways, water, sewer, electricity, natural gas, communications links, cable, and other urban infrastructure. In addition, existing development in the area is served by local law enforcement and fire protection services. As a result, extension of these services to proposed on-site uses would make use of existing facilities. Project residents would generate revenue in the form of property taxes, fees, etc., which would be available to the County to fund public services on site, such as fire and police services, flood control, library services, street maintenance, and wastewater treatment. Revenues for capital improvements would also be generated by the project directly through various forms of development fees, including, but not limited to, bridge and thoroughfare fees, fire facilities fees, sewer annexation and construction fees, and school fees. In addition, the project would build all on-site roadways, potable water, sewer, energy, and communications systems, as well as share in the upgrade of all affected roadways. Financing mechanisms for needed on-site infrastructure improvements and supporting public service facilities could possibly include, but are not limited to, private financing, assessment districts, fee districts, and Mello Roos districts. As such, the project is consistent with these RCPCG policies.

The Growth Management Chapter also includes a goal to improve the regional quality of life by developing urban forms that (1) enhance quality of life; (2) accommodate a diversity of lifestyles; (3)

preserve open space and natural resources; (4) are aesthetically pleasing and preserve the character of communities; and (5) enhance the strategic goal of maintaining the regional quality of life. Applicable policies related to this RCPC goal include:

Policy 3.12: SCAG shall encourage existing or proposed local jurisdictions' programs aimed at designing land uses which encourage the use of transit and thus reduce the need for roadway expansion, reduce the number of auto trips and vehicle miles traveled, and create opportunities for residents to walk and bike.

Policy 3.14: SCAG shall support local plans to increase density of future development located at strategic points along the regional commuter rail, transit systems, and activity centers.

Analysis: Two major transit carriers serve the Landmark Village project study area, the Santa Clarita Transit (SCT) system operated by the City of Santa Clarita and Metrolink operated by the Southern California Regional Rail Authority (SCRRA). The SCT largely serves the Santa Clarita Valley, while Metrolink currently serves Ventura, Los Angeles, San Bernardino, Riverside, Orange, and San Diego Counties.

The SCT route passes the tract map site via SR 126 and provides service to the Santa Clarita and Newhall Metrolink Stations, the Valencia Industrial and Commerce Centers, and the Valencia Town Center area. Buses run every 30 minutes. Route 2 connects with other bus routes at McBean Transfer Station, and connects with commuter trains at the Jan Heidt Metrolink Station in Newhall. Major destinations along Route 2 are Soledad Entertainment Center, Newhall, Newhall Metrolink Station, Valencia Town Center, Valencia Industrial Center, Valencia Commerce Center, and Val Verde.

SCT commuter buses provide regional service to downtown Los Angeles, the San Fernando Valley and the Antelope Valley. Specifically, commuter bus service is provided to the following locations: Olive View Medical Center in Sylmar (Route 790), Chatsworth Metrolink/Amtrak Station - Warner Center (Route 791), UCLA/Westwood - Century City (Routes 792 and 797), Van Nuys - Sherman Oaks (Routes 793 and 798), Los Angeles Union Station/Gateway Transit Center (Route 794), Vincent Grade/Acton Metrolink Station and Lancaster Metrolink Station (Route 795), Warner Center (Route 796), and downtown Los Angeles - 7th and Spring Streets (Route 799).

The proposed project is consistent with these transit policies because it would place development in an area presently served by local and regional transit. It can also be considered consistent because of its extensive pedestrian and bicycle trails network,

which are linked to adjacent uses and roadways. This network would provide project residents with a combination of transportation modes including bicycling, walking, and driving. Furthermore, because the project has been designed to provide housing that would support existing and new employment opportunities that are projected to occur in the Santa Clarita Valley, it could reduce travel distances and could create opportunities for employees to walk and bike to work.

Policy 3.17: SCAG shall support and encourage settlement patterns, which contain a range of urban densities.

Policy 3.18: Encourage planned development in locations least likely to cause environmental impact.

Policy 3.19: SCAG shall support policies and actions that preserve open space areas identified in local, state, and federal plans.

Analysis: The Landmark Village tract map site is largely disturbed due to ongoing agricultural activity and is planned for development as part of the Newhall Ranch Specific Plan, which implements the goals and policies of the Los Angeles County General Plan and Santa Clarita Valley Area Plan on a focused, site specific basis. The approved Newhall Ranch project site is located adjacent to developed uses and is subject to the provisions of the Specific Plan. The Specific Plan contains a conceptual development plan, development regulations, design guidelines, and implementation mechanisms consistent with the goals, objectives, and policies of the Los Angeles County General Plan and Santa Clarita Valley Area Plan, including those directed towards protection of open space and natural resources.

The project design was developed consistent with the Resource Management Plan (Section 2.6 of the Specific Plan) and the resource conservation objectives of the Specific Plan. Design considerations included establishment of an adequate buffer between residential uses and sensitive resources to enhance the habitat value of the natural area and preserve the river resources. To this end, roughly 38 acres of the Landmark Village project site would be dedicated to open space. The Landmark Village project would also construct a Community Park consistent with the Specific Plan as well as trails and major utility easements that function as a separation between development areas south of the SR 126 and the Santa Clara River. For these reasons, the project is consistent with these RCPG policies.

Policy 3.20: ~~SCAG shall support the protection of vital resources such as wetlands, groundwater recharge areas, woodlands, production lands, and land containing unique and endangered plants and animals.~~

Analysis: ~~The Landmark Village tract map site is largely disturbed from ongoing agricultural activity but it is located adjacent to the River Corridor SMA/SEA 23. SEA 23 was originally established along the Santa Clara River to protect the variety of riparian habitat found within and along its corridor. In general terms, the purpose of designating SEAs is to maintain and protect areas that possess biotic resources that are uncommon, rare, unique, or critical to the maintenance of wildlife. More specifically, SEA 23 was established to conserve habitat for four federally listed endangered species: (1) unarmored three spine stickleback, (2) least Bell's vireo, (3) Southwestern pond turtle, and (4) arroyo Southwestern toad in the Santa Clarita Valley.~~

~~On May 27, 2003, the County's Board of Supervisors adopted General Plan Amendment No. 94 087 (5), as part of the Board's project approvals for the Newhall Ranch Specific Plan. The General Plan Amendment approved adjustments to the existing boundaries of SEA 23, consistent with General Plan policies requiring protection of natural resources within SEAs. The approved SEA boundary adjustments were found to be consistent with the adopted Specific Plan, which established a Specific Plan "Special Management Area" designation over the adjusted SEA 23 boundaries. Although the adjusted boundaries within SEA 23 were designated as the River Corridor SMA in the adopted Specific Plan, the County's underlying SEA designation remains in effect. In addition, on May 27, 2003, the Board approved program level SEA CUP No. 94 087 (5) (SEA CUP). The approved SEA CUP allows some Specific Plan development within the SEA boundaries, including bridge crossings (e.g., Long Canyon Road Bridge), trails, bank stabilization, and other improvements.~~

~~The proposed Landmark Village project represents the first phase of construction within the Newhall Ranch Specific Plan, and the applicant is planning to construct a number of improvements within the River Corridor SMA/SEA 23 as contemplated by the Program SEA CUP No. 94 087 (5), including the Long Canyon Road Bridge, trails, water quality basins, bank stabilization, water and sewer utility crossings, storm drain outlets, and potential riparian mitigation sites.~~

~~Consistent with the approved SEA CUP, the Landmark Village project has been designed to lessen direct and indirect impacts to the sensitive resources found within the River~~

Corridor SMA/SEA 23. The site plan incorporates a setback to separate natural resources in the River Corridor SMA/SEA 23 from the residential and mixed uses associated with the project. Where improvements must be constructed in the River Corridor SMA/SEA 23, they have been sensitively designed to minimize permanent disturbance.

The drainage concept for Landmark Village proposes the use of buried bank stabilization where necessary to protect against erosion except at bridge crossings, where exposed grouted rip rap or reinforced concrete would be used. Buried bank stabilization is a modern technique used to protect development from erosion and flooding while maintaining soft banks containing natural vegetation. Construction of the bank stabilization would cause temporary impacts, but once re-planted with natural vegetation, the disturbed areas return to a natural condition, thereby, avoiding permanent impacts to the river channel. Moreover, the existing river channel width that carries the ordinary 2, 5, and 10 year flood events would be completely spanned by the Long Canyon Road Bridge. Consequently, under most circumstances, project improvements would not hinder river flows or reduce the area of the floodplain. Instead, these flows would spread across the river channel, unaffected by the bank protection and bridge abutments.

The Landmark Village tract map site would also introduce people and animals into this resource area as the project would implement a segment of the River Trail as identified by the Master Trails Plan of the Newhall Ranch Specific Plan. However, access to trails in the River Corridor SMA/SEA 23 must be restricted to daytime hours as defined by the management component of the Resource Management Plan (see Section 2.6 of the Newhall Ranch Specific Plan). In addition, the River Trail is separated from the natural resources by fencing or other barriers to discourage intrusion into natural areas. Based on the above, the project is considered consistent with these policies.

Please refer to this EIR, **Section 4.4, Biota**, for additional information on the sensitive biological resources found on and in the vicinity of the proposed project.

Policy 3.21: SCAG shall encourage the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites.

Analysis: Please refer to this EIR, **Section 4.22, Cultural/Paleontological Resources**, for information on cultural and archaeological resources on the project site and any

~~measures required by CEQA Guidelines or other regulatory provisions necessary to protect them.~~

~~**Policy 3.22:** SCAG shall discourage development, or encourage the use of special design requirements, in areas with steep slopes, high fire, flood, and seismic hazards.~~

~~**Policy 3.23:** SCAG shall encourage mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage, and to develop emergency response and recovery plans.~~

~~**Analysis:** The Landmark Village tract map site is flat and site development would not expose people to hazards associated with steep slopes. As with all areas in Southern California, the site is subject to seismic hazards associated with local and regional fault systems and uses on the site would be subject to building codes addressing seismic hazards. The site is located adjacent to the Santa Clara River and portions of the site are within the Federal Emergency Management Act (FEMA) 100 year flood boundary. The project contains a drainage concept that would protect people and development from flood hazards. In addition, the Los Angeles County Fire Department designates the project site as a Very High Fire Hazard Severity Zone (formerly called Fire Zone 4), so the project would be subject to Section 1117.2.1 of the County Fire Code, which requires preparation of a Wildfire Fuel Modification Plan, landscape plan, and irrigation plan for developed areas.~~

~~The proposed project has been designed consistent with the Land Use Plan component of the Newhall Ranch Specific Plan. Less sensitive Commercial and Medium Density residential uses are planned along SR 126. In addition, mitigation measures have been incorporated into this EIR that will minimize impacts to those residential units closest to SR 126, San Martinez Grande, and Chiquito Canyon Road.~~

~~As described above under Policy 3.20, the Landmark Village tract map site is disturbed from ongoing agricultural activity but is located adjacent to sensitive resources in the River Corridor SMA/SEA 23. The project itself has been designed to minimize impacts to sensitive resources. Where necessary, mitigation measures have been proposed, which would reduce impacts to sensitive biological and ecological resources to the extent feasible.~~

~~In summary, hazards to the project associated with wildfires, flooding and seismic events would be reduced to less than significant levels through compliance with building and~~

~~fire codes, as required by the County of Los Angeles. Impacts associated with roadway noise and disturbance to natural resources are addressed through site design and implementation of recommended mitigation measures in this EIR. Please refer to this EIR, Section 4.1, Geotechnical and Soil Resources; Section 4.2, Hydrology; Section 4.4, Biota; Section 4.8, Noise; and Section 4.14, Fire Protection Services, for additional information on the Landmark Village development plans.~~

~~The Growth Management Chapter also includes a goal to provide social, political, and cultural equity. This goal avoids economic and social polarization by promoting a regional strategic goal of minimizing social and geographic disparities and of reaching equity among all segments of society. The evaluation of the proposed project in relation to the policy stated below is intended to guide direction of this goal, and does not, however, infer regional mandates and interference with local land use powers. Applicable policies related to this RCPC goal include:~~

~~**Policy 3.24:** — Encourage efforts of local jurisdictions in the implementation of programs that increase the supply and quality of housing and provide affordable housing as evaluating in the Regional Housing Needs Assessment.~~

~~**Policy 3.27:** — Support local jurisdictions and other service providers in their efforts to develop sustainable communities and provide, equally to all members of society, accessible and effective services such as: public education, housing, health care, social services, recreational services, law enforcement, and fire protection.~~

~~**Analysis:** — SCAG prepares the Regional Housing Needs Assessment (RHNA) for a six county region that includes Ventura, Los Angeles, San Bernardino, Riverside, Orange and Imperial Counties and some 150 local governments. The RHNA defines the housing need allocation for each member local government in Southern California, including Los Angeles County. This total need is divided into housing construction need for households in four broad income categories: very low (households making less than 50 percent of median family income), low (50-80 percent of median family income), moderate (80-120 percent of median family income), and above moderate (more than 120 percent of median family income). For the unincorporated area, this need has been determined to be 9,019 units of very low income housing, 7,519 units of low income housing, 9,859 units of moderate income housing, and 25,835 units of above moderate income housing.~~

Section 3.10 of the adopted Newhall Ranch Specific Plan includes an Affordable Housing Program that provides for the direct inclusion of very low, low, and moderate income affordable housing opportunities within the Specific Plan area. At buildout, a total of 2,200 affordable dwelling units would be provided. The Affordable Housing Program includes timing mechanisms and monitoring provisions to ensure that affordable housing is provided concurrent with market rate housing. The applicant is required to identify the number and location of affordable housing units as a condition of tentative or final map approval.

The Landmark Village project proposes a total of 1,444 dwelling units. Approximately 296 units located in the project's Medium Residential, High Residential, and Mixed Use land use categories would be set aside as affordable under the Affordable Housing Program of the Newhall Ranch Specific Plan. An affirmative marketing program consisting of advertising in newspapers, information flyers, promotional materials, and on-site signage would be used to assure opportunities for local residents. The variety of housing types proposed for the project site, combined with implementation of a portion of the Newhall Ranch Affordable Housing Program, will serve to assist in meeting the County's housing needs, which cover all levels of the economic spectrum.

The Landmark Village project would implement the first phase of the Newhall Ranch Specific Plan, which is a balanced community containing the full range of community and social services. The Landmark Village project site is currently served by one fixed-route transit line (Route 2). The route passes the project site via SR 126 and provides service to the Newhall Metrolink Station, the Valencia Industrial and Commerce Centers, and the Valencia Town Center area. Buses run every 30 minutes. Route 2 connects with other bus routes at McBean Transfer Station, and connects with commuter trains at the Jan Heidt Metrolink Station in Newhall. Major destinations along Route 2 are Soledad Entertainment Center, Newhall, Newhall Metrolink Station, Valencia Town Center, Valencia Industrial Center, Valencia Commerce Center, and Val Verde. Close proximity of the project site to regional transportation modes provides greater opportunity for all members of society access to public education, housing, health care, social and recreational services (provided within and outside of the project), law enforcement, and fire services.

(b) — Regional Mobility Chapter/Regional Transportation Plan

The Regional Mobility Chapter is a summary of another SCAG document entitled, Regional Mobility Element (RME). The RME, originally adopted in 1994, is the principal transportation policy, strategy, and objective statement of SCAG, proposing a comprehensive strategy for achieving mobility and air quality mandates. The RME is also referred to as the Regional Transportation Plan (RTP), and it serves as both the federal and state required regional long range transportation plan for the SCAG region. The RTP was most recently updated in 2001. The RTP is the guide for developing the federal and state Regional Transportation Improvement Program (RTIP), which is a seven year program for regional transportation improvements for highways, transit, and aviation. The RTIP is aimed at improving the overall efficiency and people moving capabilities of the existing transportation system.

The Regional Mobility Chapter links the goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging fair and equitable access to residents affected by socio-economic, geographic, and commercial limitations.

Goals relevant to the Landmark Village project are listed below along with an analysis of the project's consistency with them.

Goals:

—Transportation investments shall be based on SCAG's adopted Regional Performance Indicators:

Mobility —Transportation Systems should meet the public need for improved access, and for safe, comfortable, convenient, faster and economical movement of people and goods.

- —Average Work Trip Travel Time in Minutes —25 minutes (Auto)
- —PM Peak Freeway Travel Speed —45 minutes (Transit)
- —PM Peak Non Freeway Travel Speed
- —Percent of PM Peak Travel in Delay (Freeway)
- —Percent of PM Peak Travel in Delay (Non Freeway)

Accessibility — Transportation system should ensure the ease with which opportunities are reached. Transportation and land use measures should be employed to ensure minimal time and cost.

- —Work Opportunities within 45 minutes door to door travel time (Mode Neutral)
- —Average transit access time

~~Environment~~—Transportation system should sustain development and preservation of the existing system and the environment. (All Trips).

- ~~CO, ROG, NO_x, PM₁₀, and PM_{2.5}~~—Meet the applicable SIP Emission Budget and the Transportation Conformity requirements.

~~Reliability~~—Transportation system should have reasonable and dependable levels of service by mode. (All Trips).

- ~~Transit~~—63%
- ~~Highway~~—76%

~~Safety~~—Transportation systems should provide minimal accident, death, and injury. (All Trips).

- ~~Fatalities Per Million Passenger Miles~~—0
- ~~Injury Accidents~~—0

~~Equity/Environmental Justice~~—The benefits of transportation investments should be equitably distributed among all ethnic, age, and income groups. (All Trips).

- ~~By Income Groups Share of Net Benefits~~—Equitable Distribution of Benefits among all Income Quintiles

~~Cost Effectiveness~~—Maximize return on transportation investments. (All Trips) ~~Air Quality, Mobility, Accessibility, and Safety.~~

- ~~Return on Total Investment~~—Optimize return on Transportation Investments
- ~~Transportation investments shall mitigate environmental impacts to an acceptable level.~~

Analysis:—The Landmark Village tract map is proposed to accommodate projected regional growth in a location that is adjacent to existing and planned infrastructure, urban services, transportation corridors, and major employment centers. Because the project has been designed to provide housing that would support existing and new employment opportunities that are projected to occur in the Santa Clarita Valley, it could reduce travel distances and could create opportunities for employees to walk and bike to work, thereby reducing vehicle miles traveled (VMT). The project also includes a mobility system that includes alternatives to automobile use, such as an extensive pedestrian, equestrian and bicycle trail system. The trails provide linkages from homes at the site to important destinations within the community, such as the school and park, recreation centers, and nearby commercial developments. The project would provide safe and convenient access to the local bus system and to the Metrolink commuter train station in Newhall. By

~~providing for convenient access to public transit opportunities, the project would help to minimize travel time to work.~~

~~The proposed project would preserve the environment by providing for needed housing and opportunities to work closer to home. The shorter travel distances will reduce VMT and associated emissions by shortening the distance between home and work and providing safe and convenient access to public transit opportunities. Please refer to this EIR, Section 4.7, Traffic/Access, and Section 4.9, Air Quality, for a further discussion of traffic and air quality impacts associated with project related traffic.~~

~~A traffic study for the Landmark Village project has been prepared and is discussed fully in this EIR, Section 4.7, Traffic/Access. The study evaluates project related, as well as long term, Santa Clarita Valley buildout traffic impacts on local and regional road networks.~~

~~The project includes a number of on and off site transportation system management actions, such as traffic signals and intersection improvements to speed the flow of traffic. Mitigation measures are proposed for traffic improvements and traffic signals, and comply with the requirements of the County's Congestion Management Program (discussed below). As a result, the project is consistent with these RTP policies.~~

~~(c) — Air Quality Chapter~~

~~The Air Quality Chapter of the RCPG is intended to facilitate an improved standard of living by encouraging sustained economic growth along with an improvement in air quality through the creation of new industries and products required to achieve cleaner air and by providing adequate transportation for all residents while meeting clean air goals.~~

~~The project's consistency with the requirements of the South Coast AQMP is discussed later in this section. As stated in the Air Quality Chapter, SCAG is responsible for preparing and approving the portions of the AQMP which relate to the following: regional demographic projections and integrated regional land use, housing, employment, and transportation programs; control measures; and strategies.~~

~~The RCPG Air Quality Chapter core actions related to the proposed project include the following:~~

~~**Goal 5.07:** — Determine specific programs and associated actions needed (e.g., indirect source rules, enhanced use of telecommunications, provision of community based shuttle services, provision of demand management based programs, or vehicle miles traveled/emissions fees) so that options to command and control regulations can be assessed.~~

Goal 5.11: Through the environmental document review process, ensure that plans at all levels of government (regional, air basin, county, subregional, and local) consider air quality, land use, transportation, and economic relationships to ensure consistency and minimize conflicts.

Analysis: The Landmark Village tract map site proposes the construction of an arterial street/infrastructure system and a network of pedestrian and bicycle trails that would provide for local travel by a combination of transportation modes, including bicycles, walking, bus transit, commuter rail service, and automobiles. The project also incorporates bus pull ins, as necessary, to accommodate bus related transit and proposes to fund its fair share of infrastructure improvements required off site through the payment of fees. As indicated in this EIR, **Section 4.7, Traffic/Access**, funding and construction of main line freeway capacity (i.e., I 5 and SR 14) and interchanges with other regional highways (i.e., I 5 at SR 126) is provided by existing sources of tax revenue and by Caltrans through allocations made by the Metropolitan Transportation Authority (MTA). Existing funding sources include state and federal gas taxes and Los Angeles County Proposition A and C sales taxes. As transportation improvements are constructed over the life of the project, the desire to improve air quality while providing adequate transportation infrastructure can be facilitated. Consequently, the project favorably addresses this issue.

As indicated above, the project proposes a pattern of development that includes a wide range of housing unit types and job creating uses. These uses would be linked by an arterial street system and a pedestrian and bicycle trails network that provide for local travel by a combination of transportation modes, including bicycles, walking, bus transit, and automobiles. The project has been designed to provide future residents of the site with employment opportunities and services within proximity to the project, through the inclusion of the commercial site. Access to the community wide trail system promotes an efficient means of access to these uses; therefore, VMT and air pollutant emissions can be minimized. Furthermore, the project is located in close proximity and adjacent to existing job centers (e.g., Valencia Commerce Center, Industrial Center, Town Center, and Corporate Center) which would help to reduce the need for long commutes from the site to more distant employment centers in Ventura County, the San Fernando Valley, and beyond. As a result, VMT and, consequently, air pollution emissions would be minimized. Based on this information, the proposed project favorably addresses the above noted air quality core actions.

For detailed discussion of this project's AQMP consistency, refer to this EIR, **Section 4.9, Air Quality**.

(d) — Water Quality Chapter

The stated purpose of this chapter is to provide a regional perspective on current water quality issues and the plans and programs for addressing these issues. In addition, the chapter identifies the current water quality goals and objectives for the region under existing law and provides a framework for ensuring that growth in wastewater treatment capacity is consistent with regional growth projections. The specific objectives for water quality in the region are identified in the various Regional Water Quality Control Board (RWQCB) *Water Quality Control Plans* (Basin Plans), discussed later in this section.

The two primary goals are:

1. To restore and maintain the chemical, physical, and biological integrity of the nation's water (federal Clean Water Act); and
2. To achieve and maintain water quality objectives that are necessary to protect all beneficial uses of all waters (state Porter Cologne Water Quality Act).

The Water Quality Chapter contains the following policy that is pertinent to the proposed project:

Policy 11.07: Encourage water reclamation throughout the region where it is cost effective, feasible, and appropriate to reduce reliance on imported water and wastewater discharges. Current administrative impediments to increased use of wastewater should be addressed.

Analysis: The Landmark Village tract map site proposes the use of reclaimed water for landscape irrigation purposes, consistent with the Public Services and Facilities Plan of the Newhall Ranch Specific Plan. The project is considered consistent with this policy. For more information see this EIR, **Section 4.11, Wastewater Disposal**.

(e) — Hazardous Waste Chapter

The Hazardous Waste Management Core Chapter is designed to assist the region's counties and cities in their efforts to plan for current and future hazardous waste management requirements and, as such, it is not applicable at the individual project level. If hazardous wastes are generated during the construction process, compliance with applicable codes and the National Pollutant Discharge Elimination System (NPDES) requirements will mitigate potential hazards and, therefore, the project is considered consistent

with this chapter. For more information regarding hazardous waste management policies, see this EIR, **Section 4.21, Environmental Safety.**

(f) — Open Space Chapter

The following policies, related to the proposed project's relationship to outdoor recreation, public health and safety, and resource protection, are identified in the Open Space Chapter of the RCPG.

Policy 9.02: — Increase the accessibility to open space lands for outdoor recreation.

Policy 9.03: — Promote self-sustaining regional recreation resources and facilities.

Analysis: — The Landmark Village tract map site provides a variety of open space for both passive and active recreation. Consistent with the Specific Plan's Community Park Land Use Overlay designation, the project provides a 16-acre Community Park that contains both active and passive recreational areas. The project also implements a segment of the Regional River Trail and Community Trails identified in the Specific Plan's Master Trails Plan. A river outlook point is located in the passive area of the Community Park, which is accessed by both the Regional River Trail and the Community Trail system. Thus, the proposed project is considered consistent with outdoor recreation and public health and safety policies identified in the Open Space Chapter of the RCPG. For more information regarding open space and recreational land uses, please see **Section 4.16, Parks and Recreation**, in this EIR.

Policy 9.04: — Maintain open space for adequate protection of lives and properties against natural and man-made hazards.

Policy 9.05: — Minimize potentially hazardous developments in hillsides, canyons, areas susceptible to flooding, earthquakes, wildfire and other known hazards, and areas with limited access for emergency equipment.

Analysis: — Open spaces proposed within the Landmark Village project site would be maintained and owned by a Homeowners Association or the County of Los Angeles to ensure that open space areas protect both persons and properties against natural and manmade hazards. Implementation of geotechnical reports and drainage concepts as well as review of plans by the Los Angeles County Sheriff and Fire Departments will ensure that development located in areas susceptible to flooding, earthquakes, and wildfire hazards are constructed and situated so as to minimize and avoid potential hazards.

~~Subsequently, the proposed project is considered consistent with Policies 9.04 and 9.05 of the Open Space Chapter of the RCPG. For more information about development plans to minimize potential hazards, please see this EIR, **Section 4.1, Geotechnical and Soil Resources**, and **Section 4.2, Hydrology**.~~

~~**Policy 9.07:** Maintain adequate viable resource production land, particularly lands devoted to commercial agriculture and mining operations.~~

~~**Analysis:** The Landmark Village tract map site is presently cultivated with row crops. Site development as proposed would result in the loss of 292 acres of active farmland. The economic and agricultural productivity of the Landmark Village site is constrained, as the property is isolated from nearby agricultural lands by the presence of SR 126 and the Santa Clara River. The loss of 292 acres of agricultural land for development of Landmark Village represents a significant unavoidable impact that was considered in the CEQA Findings adopted by the County Board of Supervisors for the Newhall Ranch Specific Plan.~~

~~A number of overriding economic, legal, social technological and other considerations were identified in the Statement of Overriding Considerations to determine that these benefits outweighed the loss of this agricultural land. The Landmark Village project is the first subdivision map filed under the Specific Plan.~~

~~**Policy 9.08:** Develop well managed viable ecosystems or known habitats of rare, threatened, and endangered species, including wetlands.~~

~~**Analysis:** The Landmark Village project site has been designed to minimize direct and indirect impacts to the sensitive resources found within the River Corridor SMA/SEA 23. For example, the site plan incorporates a setback to separate natural resources in the River Corridor SMA/SEA 23 from the residential and mixed uses associated with the project. Where improvements must be constructed in the River Corridor SMA/SEA 23, they have been sensitively designed to minimize permanent disturbance. Mitigation measures have been incorporated into the proposed project (**Section 4.4, Biota**) to minimize impacts on the endangered species, which reside in the Santa Clara River. Consequently, the proposed project is considered consistent with Policy 9.08 of the Open Space Chapter of the RCPG.~~

(2) Air Quality Management Plan (2007)

The intent of the AQMP is to establish a comprehensive program that will result in the achievement of federal and state air quality standards. The Landmark Village site is located in the SCAB, which, at the time of this writing, fails to meet the National Ambient Air Quality Standards (NAAQS) established under the federal Clean Air Act. The SCAB is classified by the U.S. Environmental Protection Agency (U.S. EPA) as an extreme nonattainment area for ozone (the only area in the nation to be classified as such), a serious nonattainment area for PM₁₀, and a nonattainment area for nitrogen oxide (NO₂).

The ~~SCAQMD~~AQMP suggests that a determination of a project's consistency with the goals and policies of the AQMP can be measured against the "Population Number and Location"² projected for a given area. SCAG projects that the Santa Clarita Valley (including the proposed project site) will undergo sustained growth through the year 2020. As mandated by the federal Clean Air Act (Section 176(c), 42 U.S.C. (Section 7506), SCAG is the responsible agency for providing current population estimates, which are then used to investigate how population increases are accommodated, and whether the project is planned in a way that results in the minimization of VMT, and consequently air pollutant emissions, so that the project is consistent with the AQMP.³

Analysis: The Landmark Village tract map site is proposed to contain a range of housing unit types and some limited job creating uses. Such uses would occur adjacent to the extension of Long Canyon and Wolcott Roads, which are linked by an arterial street system and a pedestrian and bicycle trails network that promote efficient local travel by a combination of transportation modes including bicycles, walking, bus transit, and automobiles. Because the project has been designed to provide future residents of the site with parkland, open space, and access to trails, VMT and air pollutant emissions can be minimized. Furthermore, the project is located near existing job centers (e.g., Valencia Commerce Center, Industrial Center, Town Center and Corporate Center), which helps preclude long commutes from the site to more distant employment centers in Ventura County, the San Fernando Valley and beyond; VMT and air pollutant emissions can then be further minimized. Based on this information, the proposed project is considered consistent with the AQMP.

The AQMP consistency analysis presented in the Newhall Ranch Specific Plan Program EIR fully evaluated the Newhall Ranch Specific Plan against the standards of consistency

² South Coast Air Quality Management District. *CEQA Air Quality Handbook* (Diamond Bar, California: South Coast Air Quality Management District, April 1993), Table 12-2, p. 12-5.

³ Ibid.

that apply to the AQMP in effect at that time and found the Specific Plan to be consistent. Since that time, a new AQMP (2007~~3~~) has been adopted for the SCAB. Because of the new AQMP, an update will be provided to the previous analysis conducted in the Newhall Ranch Specific Plan Program EIR. Additionally, URBEMIS2007 – version 9.2.4 (February 2008) was used in the analysis of air quality impacts. Please refer to this EIR, **Section 4.9, Air Quality**, for a consistency analysis against the 2007~~3~~ AQMP.

(3) Water Quality Control Plan (Basin Plan)

The *Basin Plan*, which includes the Santa Clara River and its watershed in the Los Angeles Region, is designed to preserve and enhance water quality and to protect the beneficial uses of all regional waters. This plan has not been updated since the 1995 version relied upon by the Newhall Ranch Specific Plan Program EIR. Therefore, based on *CEQA Guidelines* Section 15385, this analysis incorporates by reference the discussions and analysis contained in the Newhall Ranch Specific Plan Program EIR pertaining to the Basin Plan.

A consistency analysis was presented in the Newhall Ranch Specific Plan Program EIR, which fully evaluated the Specific Plan against the goals, objectives, and policies of the Basin Plan. Given that the proposed Landmark Village project is consistent with the goals, objectives, and land use designations contained in the Specific Plan, prior consistency analysis is still accurate and Landmark Village would not have any effects that were not previously examined in the Newhall Ranch Specific Plan Program EIR. Please see this EIR, **Section 4.2, Hydrology**, and **Section 4.3, Water Quality**, for more detailed discussion of how the project would comply with the Basin Plan's water quality requirements.

(4) Congestion Management Program

The CMP was enacted by the State Legislature to address traffic congestion in California's urbanized counties. The Legislature noted that the existing transportation system relies upon an overcrowded street and highway system that impacts the economic vitality of the state and diminishes the quality of life in many communities. The current CMP for Los Angeles County was adopted in 2004~~2~~, and it is required by law to be updated biennially.

An overview of the background, purposes, and goals of the CMP is incorporated by reference from the Newhall Ranch Specific Plan Program EIR. Several CMP roadways exist within the vicinity of Newhall Ranch including SR-126 and I-5. SR-126 is designated by the CMP as a State Highway (Arterial), and I-5 is designated as a State Freeway. The CMP consistency analysis presented in the Newhall Ranch Specific Plan Program EIR fully evaluated the Newhall Ranch Specific Plan and found the Specific Plan to be consistent with the 1995 CMP. Since that time, a more recent CMP (2004) has been adopted for Los Angeles County. Because of the new plan, an update will be provided to the previous analysis conducted

For this EIR, some impact analysis sections present two separate cumulative development scenarios:

- Development Monitoring System (DMS) Build-Out Scenario; and
- Santa Clarita Valley (SCV) Cumulative Build-Out Scenario (a summary of projections and DMS).

The environmental issue areas addressed with the DMS analysis include water services, wastewater disposal, education, ~~fire, traffic,~~ and library services. This scenario is discussed further under **Subsection a, DMS Build-Out Scenario**, below.

It should be noted that the list of cumulative projects (please see Recirculated Draft EIR **Appendix 3.0**, Development Monitoring System Database) used in this EIR to assess cumulative impacts is an ever-changing dynamic list. From time to time the list is increased or decreased as specific development proposals are applied for, changed, withdrawn, approved, or denied by the City of Santa Clarita and the County of Los Angeles (County). An attempt has been made to be as current as possible in compiling cumulative projects lists; however, it is possible that the lists maintained by the City of Santa Clarita and County of Los Angeles will change even further while this EIR is under public review. To account for possible changes in City/County project filings that might occur prior to or during this EIR's public review, the cumulative analysis used in this EIR incorporates an additional unfiled 400 dwelling units. The unfiled units have been accommodated by including them in the City of Santa Clarita and the County of Los Angeles SCV Consolidated Traffic Model.

a. DMS Build-Out Scenario

Added to housing units already existing in the SCV, the first scenario (herein referred to as the "DMS Build-Out Scenario") entails buildout of subdivision projects listed in the County's DMS plus the proposed project.¹ DMS data used for this analysis include all pending, recorded, and approved projects for which land divisions have been filed within the City of Santa Clarita and County unincorporated lands as of October 2003. The City plus County unincorporated area together constitute the County's SCV Planning Area, the area for which DMS is run. A build-out scenario of the SCV Planning Area based on the development in DMS is presented in **Table 3.0-1, DMS Build-Out Scenario – Santa Clarita Valley**

¹ The Los Angeles County General Plan includes provisions known as the "Development Monitoring System" to give decision makers information about the existing capacity of available public services at the time a new development proposal is considered in the four major Urban Expansion Areas of the Los Angeles County General Plan (Antelope Valley, Santa Clarita Valley, Malibu/Santa Monica Mountains, and East San Gabriel Valley). The goal of DMS is to identify the new public facilities that will be required for new development, and to ensure that the appropriate cost of any expansion of facilities will be paid for by that new development, and not assumed by existing taxpayers. For further discussion of the County's DMS, please refer to the Newhall Ranch Specific Plan Program EIR (March 1999), at Section 2.0, Environmental and Regulatory Setting, pp. 2-18-19.

**Table 3.0-2
DMS Implementation**

DMS Issues	County Review/ Implementation
Geotechnical Hazards/Grading	Not identified by DMS. Geotechnical Studies/Mitigation, Conditions of Approval, Building Permit.
Flood/Drainage	Not identified by DMS. Hydrology Study/Mitigation, Conditions of Approval, Building Permit, National Pollutant Discharge Elimination System (NPDES) Permit.
Traffic/Access	<u>Not identified by DMS.</u> Project must meet criteria and implement one or more of the mitigation measures identified. Traffic Study, Joint City/County Bridge/ Thoroughfare District, General Plan/Mitigation, Conditions of Approval, Building and Improvement Permits.
Air Quality	Not identified by DMS. Air Quality Report/Mitigation, Conditions of Approval.
Noise	Not identified by DMS. Noise Study/Mitigation, Conditions of Approval.
Biota/SEA/River	Not identified by DMS. SEATAC, Biological Study, Mapped Line, Mitigation.
Cultural Resources	Not identified by DMS. Cultural Resources Report/Mitigation, Conditions of Approval and Monitoring during grading.
Visual Resources	Not identified by DMS. Specific Plan/Mitigation, Conditions of Approval.
Water Services	DMS Analysis (Determination of adequate water supply). Mitigation, Conditions of Approval.
Wastewater	DMS Analysis (Annexation into Sanitation District service area, pay sewage connection fee as a Condition of Approval/Mitigation).
Solid Waste	Not identified by DMS. SRRE, HHWE/Conditions of Approval/Mitigation.
Utilities: Energy Resources	Not identified by DMS. Mitigation, Building plan review.
Education	DMS Analysis Fees per SB 50 or other applicable state fees/ Mitigation, Conditions of Approval.
Library Services	DMS Analysis (\$640.00/dwelling unit County Library fee/ Mitigation, Conditions of Approval.
Fire Protection	Meet service criteria, pay Fire Facilities Fee Program/ <u>Not identified by DMS.</u> <u>Conditions of Approval/Mitigation.</u> Mitigation Conditions of Approval.
Parks and Recreation	Conditions of Approval/Mitigation Not identified by DMS.
Population/Housing/ Employment	Not identified by DMS. SCV Area Plan/Mitigation, Conditions of Approval.
Agricultural Resources	Not identified by DMS. SCV Area Plan/Mitigation.

DMS Issues	County Review/ Implementation
Sheriff Services	Not identified by DMS. Conditions of Approval/Mitigation.
Man-Made Hazards	Not identified by DMS. Conditions of Approval/Mitigation.
Oak Trees	Not identified by DMS. County Forester, Oak Tree Ordinance and Guidelines, Oak Tree Report/Mitigation, Conditions of Approval.

b. Santa Clarita Valley Cumulative Build-Out Scenario

The second scenario (herein referred to as the “SCV Cumulative Build-Out Scenario”), which also adds to existing development, entails buildout of all lands under the current land use designations indicated in the Los Angeles County SCV Area Plan, the City of Santa Clarita General Plan, the proposed project, plus all known active pending General Plan Amendment requests for additional urban development in the City of Santa Clarita and County unincorporated area, including the proposed Chiquita Canyon Landfill Master Plan Revision.² Because this scenario combines both of the CEQA future development prediction methods (i.e., the listing of known projects, plus a summary of development projections from an adopted general plan), the SCV Cumulative Build-Out Scenario is considered a worst-case projection of future development activity. It also allows a comprehensive analysis of the infrastructure, services, and other impacts of the region’s buildout.

As to traffic, ~~The source of data for the SCV Cumulative Build-Out Scenario is the November 2002-2005 Santa Clarita Valley Consolidated Traffic Model, 2002 Update and Validation (SCVCTM), which was used in updated to include 2006 data in order to complete the traffic analysis found in Section 4.7, Traffic/Access. (Personal comm., Austin-Foust Associates, Inc., Daryl Zerfass.)~~ The SCVCTM was developed jointly by the City of Santa Clarita and the LACDPW and amended as necessary to include General Plan Amendment applications as they are submitted to the City and County. The modeled area extends easterly from the Los Angeles County/Ventura County line to where the Antelope Valley Freeway (SR-14) passes out of the SCV near Vasquez Rocks Park; northerly to the Grapevine area north of Castaic; and southerly to the confluence of the Interstate 5 (I-5) and SR-14 freeways south of Newhall Pass (this is the area that is the subject of the County’s SCV Area Plan).

² This Chiquita Canyon Landfill Master Plan Revision ~~proposed project~~ involves an application for a Conditional Use Permit (CUP) to expand the landfill footprint by approximately 102 acres within the existing site boundary. The project also requests to accept wastes such as water treatment and wastewater residue that are prohibited under the current CUP (89-091) approved in 1996, and to construct approved facilities under the existing CUP that were not yet constructed. The proposed revisions to the Landfill Master Plan would not change the existing maximum disposal rate that can be accepted at the landfill of 6,000 tons per day and 30,000 tons per week.

In this EIR, the SCVCTM area is often referred to as the “Valley.” A list of the future development activity expected in the valley under the SCV Cumulative Build-Out Scenario is presented in **Table 3.0-3, Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario (Project Option)** (refer to Recirculated Draft EIR **Appendix 3.0** for detailed calculations). The City of Santa Clarita General Plan can be reviewed at the City of Santa Clarita, Community Development Department (Planning Division Public Counter), 23920 Valencia Boulevard, Suite 300, Santa Clarita, California, and the Los Angeles County SCV Area Plan can be reviewed at the County of Los Angeles Department of Regional Planning, 320 West Temple Street, Los Angeles, California. Both documents are incorporated by reference in this EIR.

**Table 3.0-3
Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario
(Project Option)**

Land Use Types	Cumulative Buildout w/o Project ¹	Project	Cumulative Buildout w/ Landmark Village ¹
Single-Family	93,412 du	308 du	93,720 du
Multi-Family	47,621 du	1,136 du	48,757 du
Mobile Home	2,699 du		2,699 du
Commercial Retail	18,866,030 sq. ft.	1,033,000 sq. ft.	19,899,030 sq. ft.
Hotel	2,071 room		2,071 room
Sit-Down Restaurant	283,790 sq. ft.		283,790 sq. ft.
Fast Food Restaurant	23,600 sq. ft.		23,600 sq. ft.
Movie Theater	3,300 seats		3,300 seats
Health Club	54,000 sq. ft.		54,000 sq. ft.
Car Dealership	411,000 sq. ft.		411,000 sq. ft.
Elem./Middle School	278,590 students	437 students	279,027 students
High School	12,843 students	173 students	13,016 students
College	29,948 students		29,948 students
Hospital	247,460 sq. ft.		247,460 sq. ft.
Library	171,790 sq. ft.		171,790 sq. ft.
Church	501,190 sq. ft.		501,190 sq. ft.
Day Care	785,000 sq. ft.		785,000 sq. ft.
Industrial Park	41,743,950 sq. ft.		41,743,950 sq. ft.
Business Park	8,424,330 sq. ft.		8,424,330 sq. ft.
Manufact./Warehouse	3,932,470 sq. ft.		3,932,470 sq. ft.
Utilities	1,150,240 sq. ft.		1,150,240 sq. ft.
Commercial Office	6,380,520 sq. ft.		6,380,520 sq. ft.
Medical Office	133,730 sq. ft.		133,730 sq. ft.
Golf Course	1,209.0 ac		1,209.0 ac
Developed Parkland	477.3 ac	16 ac	493.3 ac
Undeveloped Parkland	1,000.0 ac		1,000.0 ac
Special Generator ²	413.0 sg		413.0 sg

du = dwelling unit; sq. ft. = square feet; ac = acres; sg = special generator

¹ *Updated and Validated SCV Consolidated Traffic Model, (November 2006~~2~~). Includes existing development, buildout under the existing City of Santa Clarita General Plan and SCV Area Plan, and active pending General Plan Amendment requests.*

² *Includes Wayside Honor Ranch, Six Flags Magic Mountain, Travel Village, CHP Office, and Aqua Dulce Airport*

3.0 Cumulative Impact Analysis Methodology

Management Plan (AQMP). The ~~2003-2007~~2007 AQMP was prepared to accommodate growth, to reduce the high levels of pollutants within the South Coast Air Basin, to meet state and federal air quality standards, and to minimize the fiscal impact pollution control measures have on the local economy. If the analysis shows that a project does not comply with the standards, then cumulative impacts are considered to be significant unless there is other pertinent information available to the contrary.³

Lastly, some cumulative impacts confine themselves to the project site. An example would be geotechnical impacts. For such impacts, the effects of two or more projects which occur at different locations are not affected by, and would not impact, the same piece of land. The topics in this EIR that fit this type of cumulative impact analysis methodology include: geotechnical resources; cultural/paleontological resources; and environmental safety.

The first step in evaluating cumulative impact potential is to predict the amount of future cumulative growth that is expected to occur. As indicated previously in this EIR section, such predictions have been completed under two growth scenarios, the DMS Build-Out Scenario and the SCV Cumulative Build-Out Scenario. Where the boundaries of an affected service district are precisely defined, the growth prediction was adjusted to estimate future growth on a district-by-district basis. Where boundaries are not as narrowly defined, the total cumulative growth prediction for the SCVCTM is utilized. For those impacts that are isolated to just the project site, the prediction of future growth beyond that proposed for the site or the expected tributary area is not needed. The database (growth predictions) used to assess cumulative impacts is provided in Recirculated Draft EIR **Appendix 3.0** of this EIR.

³ The ~~2003-2007~~2007 AQMP is available for public review at the County's Department of Regional Planning, 320 W. Temple Street, Los Angeles, California, and is incorporated by reference in this EIR.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

PURPOSE

*This section provides information on the project site's existing conditions, project and cumulative impact potential, and cumulative mitigation measures (refer to EIR Sections 4.1, **Geotechnical and Soil Resources**, through 4.23, **Global Climate Change**). As proposed, Landmark Village would be developed over a four to five-year period. Mitigation measures are designed to reduce the project's impact potential. This section also describes the significant impacts which would occur after mitigation measures have been applied. Technical topics addressed in the EIR were defined by the Lead Agency through the Initial Study and Notice of Preparation process.*

f. Rippability

The granular and poorly cemented nature of alluvial deposits indicates that grading operations on the Landmark Village tract map site can be performed with conventional equipment. Heavy, single-shank ripping may be required within the more indurated portions of the Saugus and Pico Formation bedrock.

At the Adobe Canyon borrow site and Chiquito Canyon grading site, the bedrock is moderately consolidated, and grading operations should be able to be performed with conventional equipment. Heavy single shank ripping probably would be required if massive conglomerate units of the Pico and Saugus Formations are encountered.

5. PROPOSED PROJECT IMPROVEMENTS

The Landmark Village project would require off-site grading and materials transport of up to 7 million cubic yards (mcy) of fill to construct the tract map site and the other related project components (i.e., debris basins, water/wastewater facilities, and the utility corridor). The approximately 7 mcy would be from the Adobe Canyon borrow site and the Chiquito Canyon grading site. Of the 7 mcy, the Landmark Village project would import up to 5.8 million cubic yards of fill- from the Adobe Canyon borrow site. In addition, the remaining off-site grading and materials transport (1.2 mcy) would be from the Chiquito Canyon grading site.

Review of Landmark Village Vesting Tentative Tract Map No. 53108 indicates that the proposed final grades will be raised from 1 to 18 feet over much of the project site and approximately 5.8 million cubic yards of fill would be imported. The tallest cut-slope is proposed to be 25 feet high along the south side of SR-126 on the western portion of the site. All of the proposed fill slopes would be less than 25 feet in height.

The existing river banks on the margin of the tract map site range from 5 to 12 feet in height. Proposed grades would be raised to 15 to 20 feet above the adjacent channel areas. Bank protection is proposed to consist of a soil cement, gunite, or rip-rap liner that would be buried/concealed behind a 4:1 (h:v) fill slope.

The Preliminary Bulk Grading Study Map for the Adobe Canyon borrow site indicates primarily westerly (northwesterly and southwesterly) facing cut slopes with minor portions facing toward the south. These slopes would have gradients up to 2:1 (h:v), but typically are designed at 3:1 (h:v) gradients or flatter. The highest proposed cut slope would be approximately 100 feet high. The maximum vertical cut to proposed grade would be 175 feet, and would be located at the northeastern portion of the site south of the proposed temporary debris basin. The maximum proposed fill would be approximately 50 feet thick,

located at the top of the proposed 3:1 (h:v) gradient fill slope west of the location of a future water tank not proposed as part of the Landmark Village project. The proposed graded area would consist of approximately 125 acres.

~~In addition, Pproject-related remedial grading would require the movement of approximately 4.2 million cubic yards of removal and recompaction reoccupation of existing material within the Landmark Village tract map site in order, and up to 5.8 million cubic yards of import from the Adobe Canyon borrow site within the approved Specific Plan boundary to meet the flood control requirements of the tract map site. Storm runoff from the relatively level pad areas that would be created would sheet flow to the two proposed temporary debris basins, one located within the Adobe Canyon area, and one located at the northerly portion of the study. A proposed trapezoidal debris channel is illustrated near the central portion on the plan.~~

The Preliminary Bulk Grading Study Map for the Chiquito Canyon grading site indicates primarily south- to southwesterly facing cut slopes with the exception of one northerly facing cut slope located along the southern portion of the site adjacent to SR-126. These slopes have gradients up to 2:1 (h:v). The highest proposed cut slope would be approximately 186 feet high and a combination 2:1 and 3:1 (h:v) gradient slope located just south of the existing Edison transmission tower. The maximum vertical cut would be approximately 130 feet located at the toe of this 186-foot-high slope. Only minor fill (less than 12 feet thick) is proposed on the Bulk Grading Study map. The proposed graded area consists of approximately 45 acres. The Bulk Grading Study indicates that 1,519,000 cubic yards of raw cut material would be generated, and 5,900 cubic yards of fill material would be placed, leaving 1,513,200 cubic yards of fill material for export to the tract map site.³ Storm runoff from the relatively level pad areas that will be created would sheet flow to the various temporary debris basins illustrated on the plan. A new access road alignment is provided to the existing Edison transmission tower located at the top of the 186-foot-high cut slope. The existing power transmission lines located at the southern portion of the site would have to be relocated.

6. PROJECT IMPACTS

The analysis of potential geologic, soil, and geotechnical impacts associated with construction and operation of the proposed project, including the significance criteria applicable to assessing such impacts, is presented below.

³ At the time that the Preliminary Bulk Grading Study Map for Chiquito Canyon was prepared, additional grading in Chiquito Canyon was anticipated due to construction of a water tank. However, the water tank is no longer proposed in that location, reducing the grading in Chiquito Canyon from approximately 1.5 mcy to approximately 1.2 mcy, as reflected in the RDEIR, Section 1.0, Project Description.

a. Significance Criteria

Appendix G of the *California Environmental Quality Act (CEQA) Guidelines* indicates that the proposed project would result in a significant geologic and soils impact if the project would:

- (a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - (i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;
 - (ii) Strong seismic ground shaking;
 - (iii) Seismic-related ground failure, including liquefaction; and
 - (iv) Landslides.
- (b) Result in substantial soil erosion or the loss of topsoil;
- (c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- (d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property; or
- (e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

The proposed project does not propose the use of septic tanks or alternative waste water disposal systems, consequently further analysis is not required for subsection (e).

In addition, the project Initial Study (Recirculated Draft EIR **Appendix ES**) suggests that a project would result in a significant geotechnical impact if:

- It is located in an active or potentially active fault zone or Alquist-Priolo Earthquake Fault Zone;
- It is located in an area containing a major landslide(s);
- It is located in an area having high slope instability;
- It is subject to high subsidence, high groundwater level, or hydrocompaction;

- The project is considered a sensitive use (school, hospital, public assembly site) located in close proximity to a significant geotechnical hazard; or
- The project would entail substantial grading and/or alteration of topography including slopes of over 25 percent.

An additional criterion against which the project is evaluated is construction within and upon expansive soils, soils with a high shrink-swell potential, corrosive soils, and other soils with properties that could have an adverse effect on future site development.

b. Construction Impacts

The proposed project would not be constructed in proximity to an active fault zone, a major landslide, or on an area of high slope instability; consequently, no construction activities would occur in areas posing these types of hazards. Any construction activities that would occur during the earlier phases of site development would be set back far enough away from existing structures such that any associated grading of temporary steep slopes that may be excavated during remedial grading (if any) or during placement of infrastructure would not affect the existing development. In addition, construction operations would be conducted pursuant to the requirements of the Occupational Safety and Health Administration (OSHA) and the mitigation measures identified in this EIR. As a result, any potential impacts associated with temporary steep slopes that may be created during remedial grading (if any) or during placement of infrastructure in the utility corridor would be mitigated to below a level of significance through standard construction practices and OSHA requirements. Accordingly, construction of the proposed project is not expected to result in any significant geologic, soil or geotechnical impacts.

c. Operational Impacts

(1) Hazards Associated with Faults

~~There are no active faults on or in immediate proximity to the Landmark Village tract map site; however,~~ ¶The proposed project would be subject to ground shaking in the event of an earthquake that would result from regional fault activity. No landslides or surficial failures have been mapped on or in close proximity to the development site, and no natural slopes would remain on or adjacent to the proposed development.

While landslides have been mapped on both the Adobe Canyon borrow site and Chiquito Canyon grading site, no Landmark Village development is proposed at these locations and landslide materials to be excavated are considered safe for use as fill material. Therefore, the potential for earthquake-induced slope failures at the Landmark Village tract map site, the ~~adobe~~-Adobe Canyon borrow site and Chiquito

Canyon grading site is considered negligible. Owing to the flat nature of the tract map site, potential hazards from shattered ridge effects are considered non-existent. Associated effects of such ground shaking on the site; however, can potentially include liquefaction, lateral spreading, dynamic compaction, differential materials response, and sympathetic movement. Each is discussed separately below.

(a) Liquefaction

Liquefaction is the process in which water-saturated, usually loose-to-moderately dense, fine-to-medium sands temporarily lose strength due to strong ground motion and behave as a viscous fluid. The results of the liquefaction assessment for the tract map site indicate that some relatively thin liquefaction-prone zones locally exist at the site at isolated depth intervals. However, more important than the identification of zones of potential liquefaction are the settlements caused by seismic excitation. Even though some thin deposits appear to be liquefiable, the potential seismically induced settlements in subsurface soils at the Landmark Village tract map site are small. The maximum cumulative calculated settlement is 1.4 inch and differential settlements are expected to be no greater than 0.9 inch in a distance of 30 feet. Certified compacted fill from proposed removals and recompaction, as shown on **Figure 4.1-1**, is anticipated to attenuate any minor settlements beneath the fill due to bridging effects. Due to the low magnitude of estimated conservative earthquake-induced total and differential settlements, and the proposed

differential settlement along with differential materials response is a source of future potential hazards along cut/fill and bedrock/alluvium contacts on the Landmark Village tract map site. Unless mitigated, development of lots underlain by transitions between different material types (e.g., bedrock to fill, bedrock to alluvium, etc.) could result in a potentially significant geotechnical impact.

Since the majority of the Adobe Canyon borrow site and Chiquito Canyon grading site are underlain by bedrock, seismically induced compaction and differential materials responses at those sites are not expected to result in a potentially significant impact.

(d) Sympathetic Movement

Strong ground motion may cause sympathetic movement along weak inclined planes, such as claybeds, or non-causative faults. Movement may be related to strong ground motion or flexural slip during folding of beds.

The specific location of future potential sympathetic movement along weak planes, such as inclined clay beds, cannot be reliably predicted on the Landmark Village tract map site at this time. Most of the site is underlain by horizontally bedded Quaternary Alluvium, which is not subject to bedding plane slippage. However, the clay-rich bedding planes of the Saugus Formation may represent a potential hazard from secondary seismogenic movement along bedding planes, and could result in a potentially significant geotechnical impact unless mitigated.

The majority of the Adobe Canyon borrow site and Chiquito Canyon grading site are underlain by inclined bedrock. Sympathetic movement along weak bedding planes could occur at those sites, but this is not considered a significant impact given the intended use of the sites for soil removal.

(2) Hazards Associated with Major Landslides

No landslides or surficial failures have been mapped on or in close proximity to the Landmark Village tract map site; therefore, site development would not be subject to hazards associated with major landslides and no potentially significant impacts are anticipated. However, the Adobe Canyon borrow site and Chiquito Canyon grading site do contain such hazards as discussed in greater depth below.

Three suspected landslides have been mapped within the proposed grading limits for the Adobe Canyon borrow site. These landslides are likely translational failures⁴ controlled by the bedding orientation. These landslides are queried on the Geologic Map because their existence or lateral extent is uncertain.

⁴ A translational failure is characterized by movement of a relatively intact slide mass above a failure plane that is relatively deep when compared to that of a debris slide.

The suspected landslides are considered safe for the intended use as a borrow site (soil removal). Four landslides have been mapped within the proposed grading limits of the Chiquito Canyon site. These landslides are primarily translational failures controlled by the bedding orientation. Cut slopes and/or grading is proposed in landslide material, and landslides are located in areas where they potentially could affect the stability of the site. As long as on-site containment is provided for potential failures, where necessary, the intended grading on the Chiquito Canyon site would not result in potentially significant impacts. However, the new alignment proposed to provide continued access to the Edison tower traverses a mapped landslide. Landslide movement could be triggered if the grading operations on the Chiquito Canyon site destabilize a portion of a landslide. This landslide must be mitigated to the satisfaction of Southern California Edison and/or Los Angeles County Department of Public Works to maintain a serviceable access to the tower.

(3) Hazards Associated with High Slope Instability

(a) Cut and Fill Slopes

Review of the Landmark Village tract map indicates that proposed final grades will be raised from 1 to 18 feet over much of the site and approximately ~~5.8-7~~ million cubic yards of import are anticipated (approximately 5.8 mcy from Adobe Canyon and about 1.2 mcy from Chiquito Canyon). The tallest cut-slope is proposed to be 25 feet high along the south side of SR-126 on the western portion of the site. No natural slopes are proposed to remain on the site. Gross stability analyses were performed for two cut-slopes anticipated to expose adverse bedding conditions. The analyzed cross-sections reflect critical conditions for stability (i.e., steeper adverse potential bedding plane(s) and greater slope height). In addition, surficial stability of cut-slopes and fill slopes (e.g., stability fills) were performed. Findings show that the analyzed cut-slopes and proposed grades, and compacted fill slopes comply with Los Angeles County requirements for gross stability under static and pseudostatic loading conditions and for surficial stability, as applicable, except that compacted on-site silty sand and cuts in Older Alluvium do not comply with surficial stability requirements. As a result, use of these soils within fill slopes and stability fills on the tract map site would result in a significant geotechnical impact unless mitigated.

The proposed cut slopes within the Adobe Canyon borrow site are designed at a gradient of 2:1 (h:v) or shallower, (approx. 26.5 degrees) with terrace drains every 25 feet for slopes greater than 3:1 (h:v) gradients. The highest proposed cut slope would be approximately 100 feet and the deepest proposed cut area would be approximately 175 feet. Due to the northeast-dipping geologic structure of the bedrock, and due to the steepness of dip of the bedrock (32 to 45 degrees), the proposed cut slopes would be favorably to neutrally oriented with respect to the geologic structure of the bedding. Even if potentially unstable cut slopes are found to exist at the site, they should be considered suitable for the intended use as a borrow site (soil removal) and no potentially significant impacts are anticipated.

(5) Hazards Associated with Placing a Sensitive Use in Close Proximity to a Significant Geotechnical Hazard

No significant geologic hazard (i.e., fault, landslide, areas of subsidence, etc.) exists on the Landmark Village tract map site; therefore, no sensitive uses would be placed in proximity to a significant geotechnical hazard and there would be no impact relative to this significance criterion. No sensitive uses are proposed on either the Adobe Canyon borrow site or Chiquito Canyon grading site as part of this project. Should future development occur at either location, more specific geologic issues would be addressed under a separate environmental review when development plans for future development projects are prepared.

(6) Hazards Associated with Substantial Grading and/or Alteration of Topography

Final grades for the Landmark Village tract map site would be raised from 1 to 18 feet over much of the site, requiring the import of approximately 5.8 million cubic yards of fill. The tallest cut-slope is proposed to be 25 feet high along the southern side of SR-126. All of the proposed fill slopes would be less than 25 feet in height. With respect to the borrow and grading sites, cut slopes would reach a maximum height of 186 feet within Chiquito Canyon, while a cut slope reaching 175 feet would occur within Adobe Canyon.

Although no numerical definition is given for the phrases “substantial grading” or “substantial alteration of topography,” a considerable amount of grading would occur on the project site, and existing topography would be altered. Grading and topographic modification, if done improperly and without due consideration for on-site geologic and hydrologic considerations, could result in ground failure and damage to future uses on the site. Thus, grading associated with the proposed project would result in a potentially significant impact unless mitigated through compliance with all appropriate grading, soil compaction, and slope construction practices.

(7) Other Potentially Hazardous Geotechnical Conditions

Soil conditions that would affect construction practices and future site development include expansive soils, soils with shrink-swell potential, and corrosive soils. Construction within and over soils with these characteristics would adversely affect future development of the site unless mitigated.

(a) Expansive Soils

Based on preliminary testing of selected samples of finer-grained soils on the Landmark Village tract map site, the expansion potential of shallow soils is medium to high (per UBC classification). Although these

- LV 4.1-9 Where recommended removals encounter ground water, water levels shall be controlled by providing an adequate excavation bottom/slope and sumps for pumping water out as the excavation proceeds, or ground water may be lowered by installing shallow dewatering well points prior to grading. Partial removals of soils above the water table and soil improvement below the water table may be another option. Dewatering may be needed depending on the season when the removals are performed and the actual removal depths are determined. Contractors shall use piezometric data for planning dewatering measures.
- LV 4.1-10 On-site soils, except any debris or organic matter, may be used as sources for compacted fills. Rock or similar irreducible material with a maximum dimension greater than 8 inches shall not be placed in the fill without approval of the geotechnical engineer. Rocks or hard fragments larger than 4 inches shall not compose more than 25 percent of the fill and/or lift. Any large rock fragments over 8 inches in size may be incorporated into the fill as rockfill in windrows after being reduced to the specific maximum rock fill size. Where fill depths are too shallow to allow large rock disposal, special handling or removal may be required. Much of the on-site alluvium and older alluvium is coarse-grained and lacks sufficient cohesion for surficial stability in fill slopes. Selective grading of fill materials with sufficient cohesion derived from on-site or imported fill shall be necessary for use in fill slopes.
- LV 4.1-11 The engineering characteristics of imported fill material shall be evaluated when the source area has been identified.
- LV 4.1-12 Most of the slopes proposed on the site are fill slopes. Stability fills are recommended for all of the cut-slopes on the site; therefore, no cut-slopes will remain after the completion of grading. All fill slopes shall be constructed on firm material where the slope receiving fill exceeds a ratio of 5:1 (h:v). Fill slope inclination shall not be steeper than 2:1 (h:v). The fill material within approximately one equipment width (typically 15 feet) of the slope face shall be constructed with cohesive material selectively graded from on-site or import fills. Stability fills are recommended where cut-slope faces will expose fill-over-bedrock or alluvium-over-bedrock conditions. These fills shall be constructed with a keyway at the toe of the fill slope with a minimum equipment width but not less than 15 feet, and a minimum depth of 3 feet into the firm undisturbed earth. Following completion of the keyway excavations, backfilling with certified engineered fill shall not proceed prior to the approval of the keyway by the project engineering geologist.
- LV 4.1-13 Backcut slopes for Stability fills shall be no steeper than the final face of the proposed fill.

(2) Recommended Earthwork Specifications

- LV 4.1-14 Areas that are to receive compacted fill shall be observed by the geotechnical engineer prior to the placement of fill.
- LV 4.1-15 All drainage devices shall be properly installed and observed by the project's licensed geotechnical engineer and/or owner's representative(s) prior to placement of backfill.
- LV 4.1-16 Fill soils shall consist of imported soils or on-site soils free of organics, cobbles, and deleterious material provided each material is approved by the geotechnical engineer.

The geotechnical engineer shall evaluate and/or test the import material for its conformance with the report recommendations prior to its delivery to the site. The contractor shall notify the geotechnical engineer 72 hours prior to importing material to the site.

- LV 4.1-17 Fill shall be placed in controlled layers (lifts), the thickness of which is compatible with the type of compaction equipment used. The fill materials shall be brought to optimum moisture content or above, thoroughly mixed during spreading to obtain a near uniform moisture condition and uniform blend of materials, and then placed in layers with a thickness (loose) not exceeding 8 inches. Each layer shall be compacted to a minimum compaction of 90 percent relative to the maximum dry density determined per the latest ASTM D1557 test. Density testing shall be performed by the geotechnical engineer to verify relative compaction. The contractor shall provide proper access and level areas for testing.
- LV 4.1-18 Rocks or rock fragments less than 8 inches in the largest dimension may be utilized in the fill, provided they are not placed in concentrated pockets. However, rocks larger than 4 inches shall not be placed within 3 feet of finish grade.
- LV 4.1-19 Rocks greater than 8 inches in largest dimension shall be ~~taken off site, or~~ placed in accordance with the recommendation of the soils engineer in on-site areas designated as suitable for rock disposal or placement.
- LV 4.1-20 Where space limitations do not allow for conventional fill compaction operations, special backfill materials and procedures may be required. Pea gravel or other select fill can be used in areas of limited space. A sand and portland cement slurry (two sacks per cubic-yard mix) shall be used in limited space areas for shallow backfill near final pad grade, and pea gravel shall be placed in deeper backfill near drainage systems.
- LV 4.1-21 The geotechnical engineer shall observe the placement of fill and conduct in-place field density tests on the compacted fill to check for adequate moisture content and the required relative compaction. Where less than specified relative compaction is indicated, additional compacting effort shall be applied and the soil moisture conditioned as necessary until adequate relative compaction is attained.
- LV 4.1-22 The Contractor shall comply with the minimum relative compaction out to the finish slope face of fill slopes, buttresses, and stabilization fills as set forth in the specifications for compacted fill. This may be achieved by either overbuilding the slope and cutting back as necessary, or by direct compaction of the slope face with suitable equipment, or by any other procedure that produces the required result.
- LV 4.1-23 Any abandoned underground structures, such as cesspools, cisterns, mining shafts, tunnels, septic tanks, wells, pipelines or other structures not discovered prior to grading shall be removed or treated to the satisfaction of the project's licensed soils engineer and/or the controlling agency for the project, and the engineer shall follow all applicable regulatory standards, including those established by the California Department of Oil and Gas.

- LV 4.1-24 The Contractor shall have suitable and sufficient equipment during a particular operation to handle the volume of fill being placed. When necessary, fill placement equipment shall be shut down temporarily in order to permit proper compaction of fills, correction of deficient areas, or to facilitate required field testing.
- LV 4.1-25 The Contractor shall be responsible for the satisfactory completion of all earthwork in accordance with the project plans and specifications.
- (a) Recommendations for Placement of Trench Backfill**
- LV 4.1-26 Trench excavations to receive backfill shall be free of trash, debris or other unsatisfactory materials prior to backfill placement, and shall be observed by the geotechnical engineer.
- LV 4.1-27 Except as stipulated herein, soils obtained from the trench excavation may be used as backfill if they are essentially free of organics and deleterious materials.
- LV 4.1-28 Rocks generated from the trench excavation not exceeding 3 inches in largest dimension may be used as backfill material. However, such material shall not be placed within 12 inches of the top of the pipeline. No more than 30 percent of the backfill volume shall contain particles larger than 1 inch in diameter, and rocks shall be well mixed with finer soil.
- LV 4.1-29 Soils (other than aggregates) with a Sand Equivalent (SE) greater than or equal to 30, as determined by ASTM D 2419 Standard Test Method or at the discretion of the project's licensed geotechnical engineer or representative ~~in the~~ with field experience, may be used for bedding and shading material in the pipe zone areas. These soils are considered satisfactory for compaction by jetting procedures.
- LV 4.1-30 No jetting shall occur in utility trenches within the top 2 feet of the subgrade of concrete slabs-on-grade.
- LV 4.1-31 Trench backfill other than bedding and shading shall be compacted by mechanical methods such as tamping sheepsfoot, vibrating or pneumatic rollers or other mechanical tampers to achieve the density specified herein. The backfill materials shall be brought to optimum moisture content or above, thoroughly mixed during spreading to obtain a near uniform moisture condition and uniform blend of materials, and then placed in horizontal layers with a thickness (loose) not exceeding 8 inches. Trench backfills shall be compacted to a minimum compaction of 90 percent relative to the maximum dry density determined per the latest ASTM D1557 test.
- LV 4.1-32 The contractor shall select the equipment and process to be used to achieve the specified density within a trench without damage to the pipeline, the adjacent ground, existing improvements, or completed work.
- LV 4.1-33 Observations and field tests shall be carried on during construction by the project's licensed geotechnical engineer to confirm that the required degree of compaction within a trench has been obtained. Where compaction within a trench is less than that specified, additional compaction effort shall be made with adjustment of the moisture content as necessary until the specified compaction is obtained. Field density tests may be omitted at the discretion of the engineer or his representative ~~in the~~ with field experience.

- LV 4.1-34 Whenever, in the opinion of the geotechnical engineer, an unstable condition is being created within a trench, either by cutting or filling, the work shall not proceed until an investigation has been made and the excavation plan revised, if deemed necessary.
- LV 4.1-35 Fill material within a trench shall not be placed, spread, or rolled during unfavorable weather conditions. When the work is interrupted by heavy rain, fill operations shall not be resumed until field tests by the geotechnical engineer indicate the moisture content and density of the fill are as specified.

(b) Drainage and Erosion Control Recommendations

- LV 4.1-36 Water shall never be allowed to stand or pond on building pads, nor should it be allowed to run over constructed slopes, but is to be conducted to the driveways or natural waterways via non-erodible drainage devices. In addition, it is recommended that all drainage devices be inspected periodically and be kept clear of all debris. Drainage and erosion control shall be in accordance with the standards set forth in the Los Angeles County Uniform Building Code.
- LV 4.1-37 Modification of the existing pad grades after approval of Fine Grading by the project supervising civil engineer can adversely affect the drainage of the lots. Lot drainage shall not be modified by future landscaping, construction of pools, spas, walkways, garden walls, etc., unless additional remedial measures (area drains, additional grading, etc.) are in compliance with Los Angeles County Codes.
- LV 4.1-38 Positive surface drainage shall be maintained away from buildings. The recommended drainage patterns shall be established at the time of Fine Grading. Roof drainage shall be collected in gutters and downspouts, which terminate at approved discharge points.
- LV 4.1-39 Permanent erosion control measures shall be initiated immediately following completion of grading.
- LV 4.1-40 All interceptor ditches, drainage terraces, down-drains and any other drainage devices shall be maintained and kept clear of debris. ~~A qualified~~ The project's licensed civil engineer shall review any proposed additions or revisions to these systems, to evaluate their impact on slope erosion.
- LV 4.1-41 Retaining walls shall have adequate freeboard to provide a catchment area for minor slope erosion. Periodic inspection, and if necessary, cleanout of deposited soil and debris shall be performed, particularly during and after periods of rainfall.
- LV 4.1-42 The future developers shall be made aware of the potential problems, which may develop when drainage is altered through landscaping and/or construction of retaining walls, and paved walkways. Ponded water, water directed over slope faces, leaking irrigation systems, over-watering or other conditions that could lead to excessive soil moisture, shall be avoided.
- LV 4.1-43 Slope surficial soils may be subject to water-induced mass erosion. Therefore, a suitable proportion of slope planting shall have root systems, which will develop well below 3 feet. Drought-resistant shrubs and low trees for this purpose shall be considered.

8. CUMULATIVE IMPACTS

Because any potential geotechnical impacts that may result with development of the Landmark Village ~~tract map project~~ site would be site-specific in nature, and because development of the proposed project, as well as the development of all surrounding projects, is required to be consistent with applicable Los Angeles County Building Code requirements relative to potential geologic hazards, the proposed project would not result in significant cumulative geologic, soil or geotechnical impacts.

The cumulative impacts analysis presented in the certified Newhall Ranch Specific Plan Program EIR considered the cumulative geologic, soil, and geotechnical impacts associated with buildout of the entire Specific Plan, including the WRP. The Newhall Ranch Specific Plan Program EIR determined that geologic, soil, and geotechnical impacts tend to be site specific, rather than cumulative in nature and that each development site would be subject to, at minimum, uniform site development and construction standards relative to seismic and other geologic conditions prevalent within the region. When development plans would be developed for a specific site, appropriate and site-specific studies would be done to identify geotechnical and soils impacts, and to recommend appropriate mitigation.

This impact analysis has identified the geologic and soils impacts associated with development of the proposed tract map site and related off-site improvements, including the Adobe Canyon borrow site, the Chiquito Canyon grading site, and the utility corridor. Grading activities at these sites would facilitate future development; therefore, they are discussed in this cumulative impact analysis. While not a part of this project proposal, future development is proposed to occur on both the Adobe Canyon borrow site and the Chiquito Canyon grading site under the adopted Specific Plan. Within the Adobe Canyon borrow site, all proposed natural slopes with daylighted bedding conditions and or steep gradients (greater than 2:1 [h:v]) adjacent to graded areas may be potentially unstable and/or subject to debris flow hazard. Based on a review of the Preliminary Bulk Grading Study Map, most of the natural slopes are self-supporting with respect to the geologic structure of the bedrock bedding planes and slope orientations; hence gross stability is generally favorable. Building setbacks or remedial measures would be required where ascending or descending slopes are not stable as determined by geologic or geotechnical stability analysis. If any natural slopes are determined to be unstable, or subject to debris flow hazard, mitigation measures would need to be designed.

Three suspected landslides have been mapped within the proposed grading limits for the Adobe Canyon borrow site. These landslides are likely translational failures controlled by the bedding orientation. Future development on this borrow site would require subsurface exploration and analysis relative to potential adverse impacts from landslides prior to its development.

1. SUMMARY

Site clearing and grading operations within the Landmark Village tract map site would have the potential to discharge sediment in the Santa Clara River during storm events. Temporary erosion control measures in disturbed areas of the project site during the construction phase (including grading in Adobe Canyon and Chiquito Canyon, and construction of the utility corridor) are recommended to reduce this potential impact to less than significant levels. Once developed, the Landmark Village project would reduce post-development stormwater flows during a capital storm event, as compared to existing conditions. Specifically, the amount of discharge from the Landmark Village project site (including the Chiquito Canyon watershed and other tributary watersheds upstream from the Landmark Village project site in which the project site lies) would decrease from 831 cubic feet per second (cfs) to 795 cfs. This 4 percent reduction in rainfall runoff would be due to the reduction in erosive areas on the project site that contribute sediment and debris to the runoff, as well as to one existing and three proposed upstream debris basins north of State Route 126 (SR-126). The proposed storm drainage improvements would meet the flood control requirements of the Flood Control and Watershed Management Divisions of the Los Angeles County (County) Department of Public Works (LACDPW) and reduce flood impacts to less than significant levels.

The Adobe Canyon borrow site is south of the Santa Clara River and in a separate watershed from the Landmark Village tract map site; therefore, it is analyzed separately. Discharge from the Adobe Canyon borrow site after grading would be reduced from 450 to 352 cfs during a capital storm event, which represents a 22 percent reduction. Discharge from the Chiquito Canyon grading site after grading would be reduced from 283 cfs to 197 cfs, which is a 30 percent reduction. These reductions in discharge would result from a reduced rate of runoff from the grading sites allowing for greater infiltration. They would also result from the proposed debris basins that would capture sediment and debris in runoff before it discharges to the river. As a result of the grading and the debris basins, discharge from the off-site grading areas would not result in downstream flooding or an exceedance of river capacity, and impacts relative to upstream and/or downstream flooding would be less than significant.

Discharge and debris flow from the utility corridor would be equal to or less than existing conditions.

Approximately 169 acres of the Landmark Village tract map site would be elevated above the capital floodplain (the remaining portions of the tract map site are already above the capital floodplain) and, therefore, none of the improvements proposed on the tract map site would be subject to flood hazard from the river or other nearby drainages. Neither the Adobe Canyon borrow site nor the Chiquito Canyon grading site include proposed structures within a 100-year or capital flood hazard area. By elevating the project site above the 100-year and capital flood hazard areas and by providing bank protection and erosion protection where necessary, no housing or structures would be exposed to flood hazards.

The proposed project would not result in risk of loss, injury, or death due to flooding, mudflow, tsunami, or seiche.

b. References for this EIR Section

The information presented in this section relies on the Landmark Village tract map drainage concept and off-site grading areas drainage concept, both of which were prepared by PSOMAS (2005). It also relies on portions of the *Landmark Village Flood Technical Report*, prepared by Pacific Advanced Civil Engineering, Inc. (PACE), dated August 2006. These reports are presented in Recirculated Draft EIR **Appendix 4.2**. This section addresses the potential hydrologic impacts of the proposed project, including the potential impacts to river hydraulics resulting from elevating the project site out of the Federal Emergency Management Agency (FEMA) 100-year and capital flood hazard areas, and the proposed bank stabilization. Potential impacts to the biological resources within and adjacent to the Santa Clara River and its tributary drainages are addressed in this EIR in **Section 4.5, Floodplain Modifications**. The proposed project's potential water quality impacts are addressed in this EIR in **Section 4.3, Water Quality**.

In addition to the above project-specific documents, the following references were used in this analysis. Documents referred to, referenced, or cited in this EIR section are incorporated by reference and are available for public review at the County of Los Angeles, Department of Regional Planning, 320 West Temple Street, Los Angeles, California:

- Center for Watershed Protection. *The Practice of Watershed Protection* (2000).
- Chow, VT. *Open Channel Hydraulics*. McGraw Hill Civil Engineering Series (1959).
- Federal Emergency Management Agency (FEMA) *Flood Insurance Map 065043-0340* (October 20, 2002).
- Los Angeles County Department of Public Works *Hydrology Manual* (~~December 1991~~1996) and *Sedimentation Manual* (~~June 1993~~1996).
- Los Angeles County Department of Public Works. *Development Planning for Storm Water Management, A Manual for the Standard Urban Storm Water Mitigation Plan (SUSMP)* (September 2002).
- Los Angeles County of Public Works *Level of Flood Protection and Drainage Protection Standards* (1986).
- Los Angeles County Department of Public Works, *Santa Clara River Enhancement and Management Plan, Flood Protection Report* (June 1986~~68~~ Final Draft).
- PACE, Inc. – *Newhall Ranch Santa Clara River HEC-RAS Modeling report*, March 2006.
- PACE, Inc. – *Landmark EIR – Newhall Ranch Santa Clara River LA County & FEMA Updated Floodplain and Floodway Studies*, - May 2006
- PSOMAS. *Surveyed Topography Data for River Village* (1999).

a. Explanation of County Capital Flood¹

In 1931, the Los Angeles County Flood Control District (now the Flood Control Division of the LACDPW) began development of a comprehensive plan of flood control facilities to collect and convey flows from the mountainous canyons, the alluvial fans, and the urbanized coastal plain.

The major needs in designing the system were the reduction of damage due to high canyon flows, the conveyance of large flows of water in a major storm, and the ability to meet future flood control needs. The design of the flood protection system for the County is based upon the LACDPW's 50-year capital flood hydrology. The reader should note that the LACDPW 50-year capital event design flow rate is well in excess of the FEMA 100-year flow rate.

The Department's 50-year capital flood (or Qcap) hydrology is based on a "design," or theoretical storm event, which is derived from 50-year frequency rainfall values and is patterned after actual major extra-tropical storms observed in the Los Angeles region. The 50-year capital frequency design storm is assumed to occur over a period of four days, with the maximum rainfall falling on the fourth day. For the sake of clarity and to minimize confusion, the prior sections and remaining sections of this document will drop the reference to "50-year capital flood" and only use the term "capital flood."

Analysis of recorded major storms reveals that, during the 24-hour period of maximum rainfall, rainfall intensity typically increases during the first 70 to 90 percent of the period and decreases in the remaining time. Furthermore, approximately 80 percent of the amount of the 24-hour rainfall occurs within the same 70 to 90 percent of the period. In developing the capital flood, the 50-year frequency design storm is assumed to fall on saturated soils. In converting rainfall to runoff, rainfall that is not lost due to the hydrologic processes of interception, evaporation, transpiration, depression storage, infiltration, or percolation is assumed to be surface runoff. The effect of snowfall or snowmelt on rainfall-runoff relationships is a consideration in only a very limited portion of the County (i.e., the higher elevations) where snowfall accumulates in winter.

Another assumption made in developing a capital flood design flow rate is that natural portions of the watershed have been burned by fire. When a watershed burns, the soil infiltration rate decreases due to the loss of vegetation and physical changes in the soil. The County has run field infiltrometer tests in order to quantify the effect that burning has on the coefficient of runoff. The effect of burning the watershed can increase the design runoff rate from 10 percent to 20 percent.

¹ Los Angeles County Department of Public Works, *Hydrology Manual* (Alhambra, California, ~~December 1990~~ January 2006).

(1) Effects of Soil Type and Amount of Imperviousness on Runoff Rates

The rate of runoff is directly related to the type of soil (see **Sections 4.1, Geotechnical and Soil Resources**, and **4.18, Agricultural Resources**, for further discussion regarding on-site soils). Certain soil types accept water faster (are more permeable) than other soils. Therefore, the types of soils present on a site are used in the calculations of runoff. Different soil types have very different water infiltration (or absorption) rates. If a sandy soil (highly permeable) is paved over, the coefficient of runoff would greatly increase, whereas if a clay soil (not highly permeable) is paved over, runoff values would go up, but not as high as in the case of sandy soil because the sandy soil absorbs water faster; therefore, the paving would create a greater disparity between the previously low runoff coefficient for the permeable sandy soil and the new higher runoff coefficient based on the impermeable pavement. In small storms, some soils can absorb 100 percent of the rainfall. For example, soil type 015, Tujunga Fine Sandy Loam, can completely absorb a 0.5-inch per hour (in/hr) storm and almost completely absorb a heavy/intense 1.0 in/hr storm, thereby yielding extremely low runoff rates. For a 200-acre parcel, different soil types such as the very pervious 015 (Tujunga Fine Sandy Loam) or the highly impervious 012 (Ramona Clay Loam) will produce radically different runoff quantities for the same rainfall events. For example, an intense storm releasing 1.0 in/hr of water will be quickly absorbed by the very pervious soil type 015 (Tujunga Fine Sandy Loam), and, therefore, the water runoff rate from the parcel would be 20 cfs. For the same size parcel with a very impervious soil, such as soil type 012 (Ramona Clay Loam), the water runoff rate for a 1.0 in/hr storm would increase to 168 cfs.

(2) Effects of Burning and Bulking

In an undeveloped watershed, capital flood flow rates assume a burned condition, which causes the coefficient of runoff to increase. Further, after increasing the coefficient of runoff for burning, the flow rate is then multiplied by a bulking factor, which is used to account for the amount of mud and debris that would be contained within the flow from the burned watershed. In the case of the proposed Landmark Village project, the increase in the runoff coefficient, or flow rates, to account for burning is the equivalent of 10 to 20 percent. Furthermore, application of the bulking factor to account for debris production would increase runoff quantities by 20 to 50 percent over and above the burned flow rate. Computer modeling for this project was used to estimate the runoff for the 50-year capital storm events. The analysis considered burned hydrology, but no additional bulking factors were used in the proposed (post-development) on-site runoff conditions because sediment-trapping devices are proposed upstream of the project site and north of SR-126.

unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) Permit. In 1987, the CWA was again amended to add Section 402(p), requiring that the U.S. Environmental Protection Agency (U.S. EPA) establish regulations for permitting of stormwater discharges (as a point source) by municipal and industrial facilities and construction activities under the NPDES permit program. The U.S. EPA published final regulations directed at municipal separate storm sewer systems (MS4s) serving a population of 100,000 or more, and stormwater discharges associated with industrial activities, including construction activities, on November 16, 1990. The regulations require that MS4 discharges to surface waters be regulated by a NPDES Permit (Phase I Final Rule, 55 Fed. Reg. 47990). The U.S. EPA published final regulations directed at stormwater discharges not covered in the Phase I Final Rule, including small construction projects of 1 to 5 acres, on December 8, 1999 (Phase II Final Rule, 64 Fed. Reg. 68722).

Section 404 of the CWA regulates activities that result in the location of a structure, excavation, or discharge of dredged or fill material into “waters of the U.S.,” which include wetlands along with non-wetland habitats, such as streams (including intermittent streams), rivers, lakes, ponds, etc. The Santa Clara River, including that portion of the river that flows through the Landmark Village tract map site, is designated by the U.S. Geological Survey as “waters of the U.S.” Four other drainages within or adjacent to the project site are also considered “waters of the U.S.” and fall under ACOE jurisdiction. These include Castaic Creek, Chiquito Canyon Creek, San Martinez Grande Canyon Creek, and Potrero Canyon Creek (see **Section 4.4, Biota**, for further information).

The CWA authorizes the U.S. EPA to permit a state to serve as the NPDES permitting authority in lieu of the U.S. EPA. The State of California has in-lieu authority for an NPDES program. The Porter-Cologne Water Quality Control Act authorizes the SWRCB, through the RWQCB, to regulate and control discharges into waters of the state. The SWRCB entered into a memorandum of agreement with the U.S. EPA on September 22, 1989, to administer the NPDES program governing discharges to “waters of the U.S.”

To facilitate compliance with federal regulations, the SWRCB has issued two statewide general NPDES permits for stormwater discharges: one for stormwater from industrial sites (not applicable to the Landmark Village project), and the other for stormwater from construction sites (NPDES No. CAS000002, General Construction Activity Storm Water Permit, reissued on August 19, 1999 as amended and further modified by Resolution No. 2001-046 on April 26, 2001). Under the General Construction Activity Storm Water Permit as reissued, facilities discharging stormwater associated with construction projects with a disturbed area of 5 or more acres are required either to obtain individual NPDES permits for stormwater discharges, or to be covered by a statewide general permit by completing and filing a Notice of Intent (NOI) with SWRCB. However, a ~~recent~~ ruling (March 2003) amended the requirements to include all

The fluvial study examined local, long-term and episodic components of riverbed adjustment. The study found that localized impacts from proposed bridge piers would occur; however, these impacts would not be significant. The study also found that the Landmark Village project would not change the fluvial mechanics of the Santa Clara River and, therefore, would not create a significant impact.

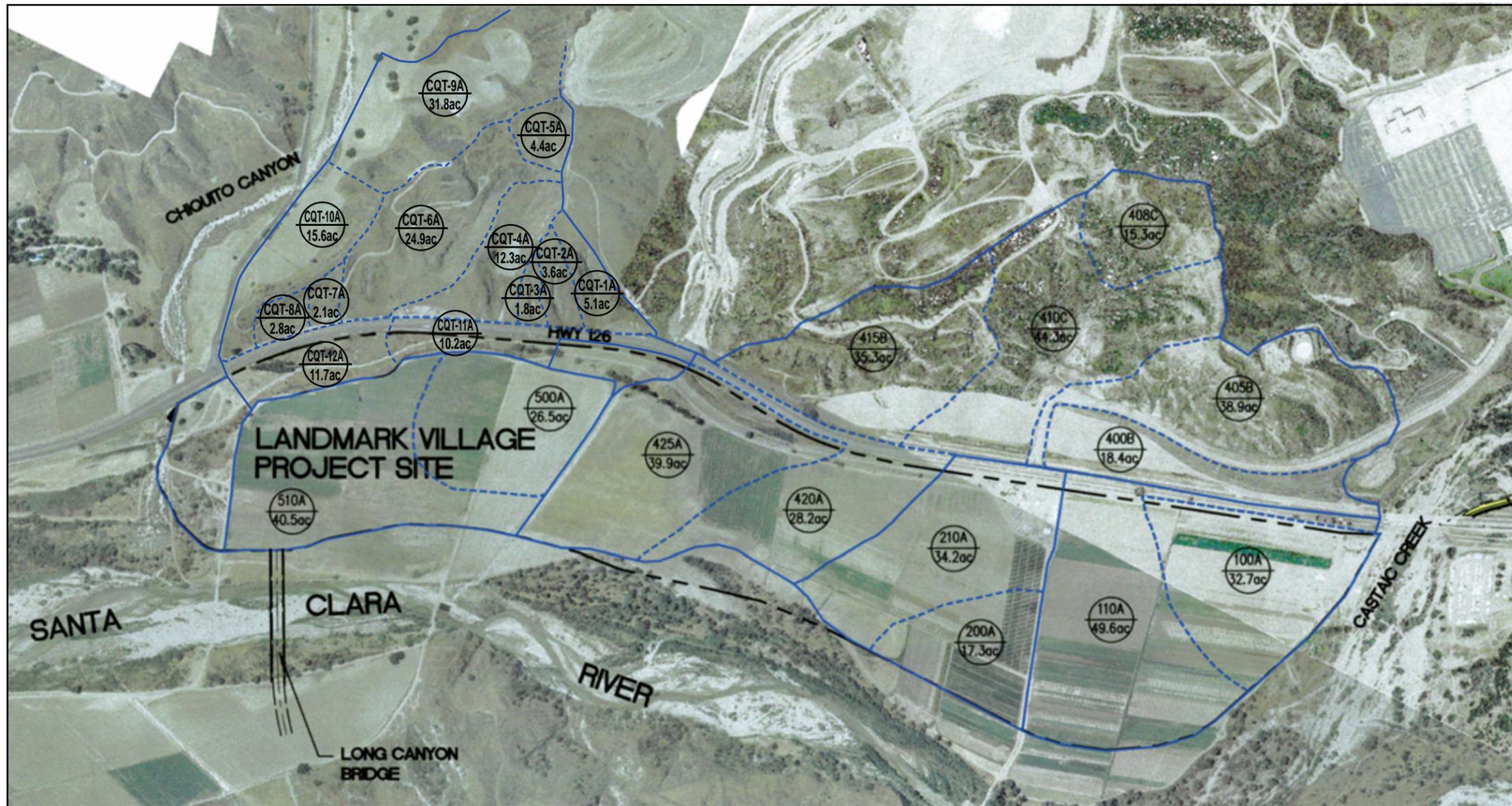
6. EXISTING CONDITIONS

The entire Landmark Village project site is located within the Santa Clara River basin. ~~It~~ The river flows through the northern portion of the Newhall Ranch site from east to west. The river has a Qcap of 116,236 cfs at a point upstream of Castaic Creek, and a Qcap of 140,776 cfs just west of the confluence of Castaic Creek and the Santa Clara River (values based on 2005 revised capital flood flow rates issued by LACDPW).

The entire watershed of the Santa Clara River basin at the Pacific Ocean is 1,634 square miles in area. The watershed drains portions of the Los Padres National Forest from the north, the Angeles National Forest from the northeast and east, and the Santa Susana Mountains from the south and southeast. At the downstream end of the Newhall Ranch Specific Plan site, the Santa Clara River drainage area is 644 square miles. The Landmark Village tract map site represents approximately 0.46 square mile (0.07 percent) of the 644-square-mile watershed (292.6 acres/640 acres per square mile = 0.46 square mile).

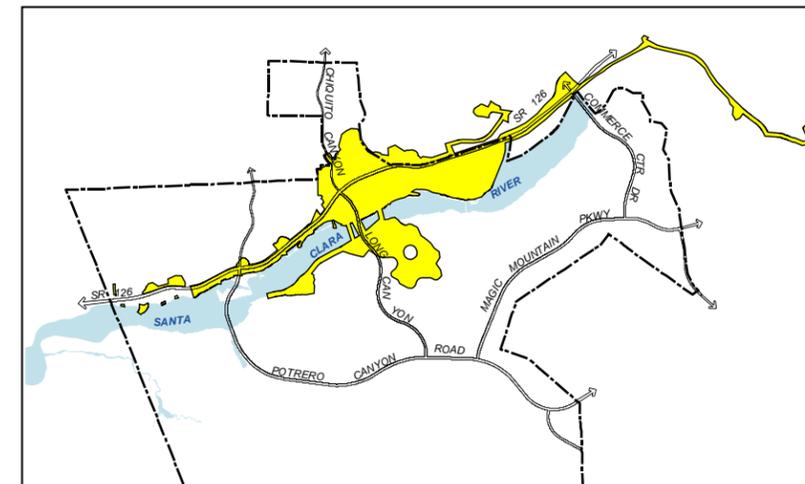
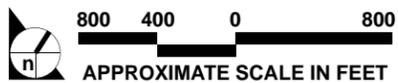
The Landmark Village tract map site is located immediately northwest of the confluence of Castaic Creek and the Santa Clara River. The Santa Clara River forms the southern and western boundaries of the project site, while the eastern project boundary abuts Castaic Creek. There are a total of six drainages located in the vicinity of the project, excluding the river. These include Castaic Creek, Chiquito Canyon Creek, San Martinez Grande Canyon Creek, Potrero Canyon Creek, a drainage from the adjacent landfill, and an unnamed jurisdictional drainage within the project site. Natural tributaries that drain into or adjacent to the project site include Chiquito Canyon Creek on the river's north bank, Long Canyon Creek on the south bank, and Castaic Creek, which enters the river upstream of the project site. The Chiquito Canyon Creek drainage is approximately 4.8 square miles, with a stream length of approximately 22,000 feet. The Long Canyon Creek drainage area is approximately 1.5 square miles, with a stream length of approximately 18,350 feet. The Castaic Creek watershed, the largest of the tributary watersheds, is approximately 209 square miles (including the area above the dam).

The Adobe Canyon borrow site is located south of the Landmark Village tract map site and east of Long Canyon, while the Chiquito Canyon grading site is located north of Landmark Village and SR-126. Rainfall in the tributary area is an annual average of 17 inches and generally occurs in the winter months. Runoff flows to and through the Landmark Village site is via sheet flows and natural concentrated flows (see **Figure 4.2-1, Existing Tributary Drainage Areas**).



Legend:

- Sub-Basin Number
Sub-Basin Area
- Residential Project Boundary
- Drainage Area Boundary
- Sub-Basins Boundary



SOURCE: Pacific Advanced Civil Engineering, Inc., Landmark Village Flood Technical Report (June 2005)

(Revised) FIGURE 4.2-1

Existing Tributary Drainage Areas

The reach of the Santa Clara River adjacent to, and downstream of, the project site has perennial surface flows primarily created by tertiary treated effluent discharges from two upstream water reclamation plants operated by the County Sanitation Districts of Los Angeles County and by urban runoff. Natural flows in the river usually only occur in the winter due to storm runoff. Because rainfall within the Santa Clarita Valley varies from year-to-year, river flows can also vary significantly from year-to-year.

The reach of the river within and adjacent to the project site has multiple channels (braided). High sediment loads, bank erodibility, and intense and intermittent runoff conditions characterize this kind of system. The river has the potential for aggradation (deposit sediment) and degradation (scour or remove sediment) in various locations along the study reach based upon hydraulic conditions present in the various sub reaches of the river. Historical data analysis has found that the riverbed within the Landmark Village study area has aggraded up to 3 feet and degraded as much as 8 feet. Fluvial modeling, with the proposed Landmark Village bank protection improvements and the Long Canyon Road Bridge, identified the potential for up to 2 feet of aggradation and 5 feet of degradation during the capital flood event, or within the range documented by the historical data. Velocities and water surface elevations in the river vary from section-to-section of the river based on various hydraulic and hydrologic parameters. In general, velocity and water depth along the river will increase with higher discharge. An example of these relationships is provided in Table 3.1 of the PACE August 2006 report (Recirculated Draft EIR **Appendix 4.2**). The data in that table indicate that velocities measured in fps, more than double, on average, from the 2-year to the 100-year storm event, while cross-sectional flow area increases ten-fold on average. In contrast, discharge increases almost 24 times from the 2-year to the 100-year storm event. Velocity and water depth percent increases do not correspond to the percent discharge increases because the wide river channel allows flood flows to spread out within the river cross-section thus reducing the increases in velocity and depth.

Provided below is information regarding the existing drainage characteristics of the off-site tributary area, and the Landmark Village project site, as well as the amount of runoff, which flows through and from the site into the river.

a. Tract Map Site (VTM 53108)

The entire tributary drainage area for the Landmark Village site (excluding the Chiquita Canyon Landfill drainage-area) is approximately 568 acres and is comprised of six drainage-areas that independently drain toward the Santa Clara River (see **Figure 4.2-1**). The ~~475~~349-acre Chiquita Canyon Landfill tributary area extends predominantly in the northerly direction from the site and runoff from the tributary area flows through the site.³

³ The Chiquita Canyon Landfill drainage (sub-basin 700 AB, ~~475~~349 AC) drains through the Landmark Village tract map site, but the project would not impact this drainage and it will remain a separate, unmodified open

The majority of the off-site drainage area north of the SR-126 is undeveloped land with moderate slopes. Runoff from this area flows through drainage channels underneath SR-126 and then largely sheet flows southwesterly through the Landmark Village site to the river. Runoff from the Chiquita Canyon Landfill tributary area flows into a debris basin located north of SR-126 prior to discharging through a drainage channel under SR-126, and onto and through the Landmark Village site.

Existing discharges from the project site are somewhat concentrated by both natural and man-made features as flow is conveyed to the river. However, these natural and man-made drainage features do not include drainage structures. Rather, surface water flows have naturally formed paths of least resistance and concentrate at existing topographic depressions or cut channels through the site that serve as concentrated discharge locations. There are currently no existing drainage or erosion/sedimentation control improvements located within the site other than minor agricultural drainage ditches and an insignificant amount of loose rock and earthen riverbank protection.

Capital flood runoff quantities for the drainage-areas are provided in **Table 4.2-3, Existing Drainages and Runoff Discharge – VTTM 53108**. In accordance with LACDPW requirements, the burned and bulked storm event (the capital storm) was used to calculate the discharge. Under existing conditions, burned and bulked flows from the six drainage-areas (excluding the Chiquita Canyon Landfill) total 831 cfs.

Table 4.2-3
Existing Drainages and Runoff Discharge
VTTM 53108

Drainage Areas	Acreage	Time of Concentration (minutes)	Q50u ¹ (cfs)	Q50b ² (cfs)	Q50bb ³ (cfs)
<i>Drainage Area 1</i>					
100A	32.7	22	27	41	52
110A	49.6	20	44	58	74
Cumulative ⁴	82.3			87	111
<i>Drainage Area 2</i>					
200A	17.3	17	17	24	30
210A	35.8	24	28	39	50
Cumulative ⁴	53.1			60	76
<i>Drainage Area 3</i>					
400B	18.4	24	14	20	25
405B	38.9	28	27	39	50
408C	15.3	8	25	32	41
410C	44.3	19	41	57	72
415B	35.3	11	46	62	79

drainage; however, it would be placed into a closed drainage system upon completion of the Landmark Village project. Runoff from the project site would not discharge into this system.

Drainage Areas	Acreage	Time of Concentration (minutes)	Q50u ¹ (cfs)	Q50b ² (cfs)	Q50bb ³ (cfs)
420A	34.4	24	27	37	47
425A	39.9	20	35	48	61
Cumulative ⁴	226.5			206	260
<i>Drainage Area 4</i>					
500A	26.5	20	23	33	42
510A	40.0	24	31	44	53
Cumulative ⁴	66.5			65	83
<i>Drainage Area 5</i>					
CTQ-1A	6.1	8	10	13	16
CTQ-2A	3.6	6	7	9	11
CTQ-3A	1.8	5	4	5	6
CTQ-4A	12.3	10	17	22	28
CTQ-5A	4.4	5	10	12	15
CTQ-6A	24.9	15	27	36	46
CTQ-7A	2.1	5	5	6	8
CTQ-8A	2.8	5	6	7	10
CTQ-9A	31.8	14	36	48	61
CTQ-10A	15.6	11	21	27	35
CTQ-10A	10.2	17	18	18	19
CTQ-12A	11.7	10	26	26	28
<i>Drainage Area 6</i>					
620A	12.4	22	10	14	18
Cumulative (Areas 5 & 6) ⁴	140			243	301
CumulativeTotals⁴	568.1			660	831

Source: PSOMAS, Landmark Village Tentative Tract Map 53108 Drainage Concept (2005).

¹ Q50u - 50-year rainfall, unburned and unbulked (clear flow) runoff intensity.

² Q50b - 50-year rainfall, burned flow runoff intensity.

³ Q50bb - 50-year rainfall, burned and bulked flow runoff intensity. Bulked flow runoff applies a 1.27 multiplier to burned runoff coefficient.

⁴ Cumulative data is the result of LACDPW Modified Rational Method tabulations, shown in Recirculated Draft EIR **Appendix 4.2**, PSOMAS, Landmark Village Tentative Tract Map 53108 Drainage Concept (2005)

Note: This table does not include the utility corridor.

The capital flood within the river along the project site is approximately 140,776 cfs just west of the confluence of Castaic Creek and the Santa Clara River. The peak (burned and bulked) flow rate from the entire tributary area (including the Chiquita Canyon Landfill drainage area) is approximately 1,660 cfs. Existing burned and bulked flow from the project site is approximately 831 cfs. Therefore, capital flood flows from the project site are approximately less than one percent of the river capital flood discharge rate.

A portion of the project site lies within the County's capital floodplain for the river (see **Figure 4.2-2, Existing County Capital Flood Plain Boundaries**) and within the 100-year floodplain identified by

FEMA Flood Insurance Rate Map (FIRM) No. 065043-0340 (October 20, 2002) for the unincorporated areas of Los Angeles County (see **Figure 4.2-3, Existing FEMA Flood Plain Boundaries**). The 100-year floodplain boundaries are based on historical runoff records as measured with stream gauges. Mapping the 100-year floodplain is important because FEMA uses the data to establish standards for flood insurance coverage under the Natural Flood Insurance Program (NFIP). Under Flood Insurance Agency (FIA) criteria, the 100-year flood elevation is the “base flood” and any land that is outside of this 100-year, or base flood, elevation is considered reasonably (2-yr, 5-yr, 10-yr, 20-yr, 50-yr, FEMA 100-yr and LACDPW capital) safe and free from flood hazards.

As a result of Hurricanes Rita and Katrina in 2005, Congress has allocated funding to FEMA to study and identify flood hazard areas throughout the U.S. (particularly in and around large population centers). The Santa Clara River and its major tributaries have been identified as a study area from the headwaters in Acton to the Pacific Ocean.

FEMA and their contracted consultants are heading the effort with Los Angeles and Ventura counties to update the floodplain and floodway for the Santa Clara River and the major tributaries. The floodplain is determined as the peak limits of flooding of a river, channel, etc. during a particular design storm event. The floodway limits are typically inside the floodplain for each design storm event. The floodway is a theoretical limit line where the insignificant (non-flow carrying) floodplain fringe is eliminated. By definition, the floodway is the encroachment of the floodplain from both directions to raise the water surface up to 1.0 foot.

In the case of the Santa Clara River at the Newhall Ranch study area, there are two sets of floodplain limit lines. The FEMA Flood Insurance Rate Maps for the 100-year event ($\pm 60,000$ cfs) were recently updated and adopted by FEMA (2002), but FEMA has not mapped a 100-year floodway in this reach of the river. LACDPW has a mapped floodplain and floodway for the Santa Clara River for the capital flood event ($\pm 140,000$ cfs), which is the LACDPW design storm event.

All of the Newhall Ranch Santa Clara River designs have been required to meet the higher ($\pm 140,000$ cfs) capital flood event. The Capital flood flow rate is ± 2.5 times greater than the FEMA 100-year flow rate and, therefore, the design criteria required to meet the LADPW capital storm is much more conservative and will meet/exceed the 100-year FEMA criteria.

Updated hydrology (run-off flow rate) will be reevaluated and the 1995 Joint Los Angeles and Ventura County study is being considered as the basis for the reevaluation (the 1995 study results were similar to the existing FEMA 100-year flow rate of $\pm 60,000$ cfs). LACDPW has stated to FEMA that Newhall has provided updated Capital Floodplain Modeling results and LACDPW has approved the results for the existing condition. As part of the Newhall Ranch Specific Plan, a detailed floodplain and floodway analysis will be prepared for the updated existing conditions and the proposed Newhall Ranch development. This information will ultimately be adopted by FEMA for use as the published floodplain and floodway for the river in this reach.

It is not expected that the newly defined FEMA initiative to reevaluate the flood hazards (floodway and floodplain) along the Santa Clara River will impact any portion of the Newhall Ranch Specific Plan. As part of the Newhall Ranch Specific Plan, updated floodplain and floodway mapping will be provided to LACDPW and FEMA for review and approval.

The existing floodplains for the seven storm events are shown in Figures 3.2A through 3.2F of the PACE report (Recirculated Draft EIR **Appendix 4.2**). The currently mapped capital floodplain (ML Map) lines are shown in Figure 4.5 of the PACE report. The updated capital floodplain limits are shown in the PACE March 2006 Santa Clara River HEC-RAS Modeling report (Recirculated Draft EIR **Appendix 4.2**).

The difference in elevation between the channel bottom and the 100-year floodplain along the margins of the river varies greatly at the project site. This difference ranges from approximately 4.3 to 16.3 feet and is dependent upon the width of the river channel. For example, in wider portions of the river channel where flows spread out with low velocities, there is only a small elevational difference between the channel bottom and the adjacent floodplain boundary. In contrast, the channel is often deep where it is narrower, creating a large elevational difference between the channel bottom and the floodplain water surface.

The substrate of the river channel (i.e., top layer of the river bottom) is primarily sand, which is actively eroded and deposited in flood events. Previous studies (Simons and Li) have demonstrated that sediment deposition and scouring along the upper Santa Clara River are generally in equilibrium, and that there are no major trends of channel degradation or aggradation. However, some localized areas may experience either greater scouring or deposition. Updated studies (PACE 2006) provide more detailed analysis of long-term, general (~~capital~~) and local aggradation and degradation trends in the river for the existing and proposed project conditions. The results of this analysis are similar to previous

reports in that the river is in a relative state of equilibrium and the proposed project impacts are not significant because they do not substantially modify existing conditions.

b. Adobe Canyon Borrow Site

There are eight sub-basins within the approximately 213-acre tributary for the Adobe Canyon borrow site. Five of these sub-areas that independently drain into Long Canyon watershed areas, and eventually discharge to the Santa Clara River to the north. The remaining three sub-areas drain directly to the Santa Clara River upstream from Long Canyon (see **Figure 4.2-4, Existing Drainage Patterns – Adobe Canyon Borrow Site**). Most of these sub-basins drain northwesterly, while the remaining drain northerly and northeasterly to Long Canyon. The majority of the tributary area is undeveloped with steep to moderate slopes. Runoff from this borrow site is shown in **Table 4.2-4, Existing Drainages and Runoff Discharge – Adobe Canyon Borrow Site**. Total burned and bulked runoff during a capital storm under existing conditions would be approximately 450 cfs.

**Table 4.2-4
Existing Drainages and Runoff Discharge – Adobe Canyon Borrow Site**

Sub-Basins	Acreage	Time of Conc. (minutes)	Q50u ¹ (cfs)	Q50b ² (cfs)	Q50bb ³ (cfs)
ADB-1A	35.8	11	47	62	90
ADB-2A	40.0	12	49	65	95
ADB-3A	24.0	12	30	39	50
ADB-4B	16.7	13	20	26	33
ADB-5B	39.9	20	34	48	61
ADB-7C	27.4	14	31	41	52
ADB-8C	12.9	11	17	22	28
ADB-9C	16.6	9	25	32	41
Totals	213.3		253	335	450

Source: PSOMAS, Off-Site Borrow Areas Drainage Concept (Recirculated Draft EIR **Appendix 4.2**) (Under Conditional Use Permit).

¹ Q50u - 50-year rainfall, unburned and unbulked runoff intensity

² Q50b - 50-year rainfall, burned runoff intensity

³ Q50bb - 50-year rainfall, burned and bulked runoff intensity

c. Chiquito Canyon Grading Site

As previously mentioned, the approximately 127-acre Chiquito Canyon grading site is located within a 568-acre drainage area to the north of the Landmark Village tract map site. There are 12 sub-basins within the approximately 127-acre Chiquito Canyon grading site drainage area that ~~independently~~ drain toward the Santa Clara River (see **Figure 4.2-5, Existing Drainage Patterns – Chiquito Canyon Grading Site**). Runoff from ~~ten most~~ of these sub-basins drains predominantly southerly toward existing culverts under SR-126, and eventually through the tract map site, while runoff from ~~two one~~ sub-basin drains toward Chiquito Canyon to the west. The majority of the area is undeveloped land with steep to moderate slopes. Runoff discharge from the Chiquito Canyon Grading Site is shown in **Table 4.2-5, Existing Drainages and Runoff Discharge – Chiquito Canyon Grading Site**. Total burned and bulked runoff during a capital storm under existing conditions would be 283 cfs.

**Table 4.2-5
Existing Drainages and Runoff Discharge – Chiquito Canyon Grading Site**

Sub-Basins	Acreage	Time of Conc. (minutes)	Q50u ¹ (cfs)	Q50b ² (cfs)	Q50bb ³ (cfs)
CQT-1A	6.1	8	10	13	16
CQT-2A	3.6	6	7	9	11
CQT-3A	1.8	5	4	5	6
CQT-4A	12.3	10	17	22	28
CQT-5A	4.4	5	10	12	15
CQT-6A	24.9	15	27	36	46
CQT-7A	2.1	5	5	6	8
CQT-8A	2.8	5	6	7	10
CQT-9A	31.8	14	36	48	61
CQT-10A	15.6	11	21	27	35
CQT-11A	10.2	17	18	18	19
CQT-12A	11.7	10	26	26	28
Totals	127.3		187	229	283

Source: PSOMAS, Off-Site Borrow Areas Drainage Concept (Recirculated Draft EIR **Appendix 4.2**) (Under Conditional Use Permit).

¹ Q50u - 50-year rainfall, unburned and unbulked runoff intensity

² Q50b - 50-year rainfall, burned runoff intensity

³ Q50bb - 50-year rainfall, burned and bulked runoff intensity

7. PROPOSED IMPROVEMENTS

a. Related Improvements

The Landmark Village tract map site is proposed on approximately 292.6 acres of land, located within the boundaries of the approved Newhall Ranch Specific Plan. To facilitate development of this site, several off-site project-related components would be implemented on an additional ~~1,063.4~~770.8 acres of land mostly within the boundaries of the approved Specific Plan, for a total project site of approximately 1,063.4 acres. These project-related components include the following:

- a cut and fill grading operation, which includes fill imported to the Landmark Village tract map site from a 181-acre borrow site located south of the Santa Clara River, and grading to accommodate roadway improvements to SR-126 and debris basins for stormwater flows collected by the project's storm drainage system on approximately 120 acres of land, located directly north of SR-126 within Chiquito Canyon (and related haul routes);
- a utility corridor, extending both east and west of the tract map site, which would extend municipal services to the tract map site;
- a water tank to convey potable and recycled water to the tract map site; and
- construction of the Long Canyon Road Bridge, bank stabilization, Turf reinforcement mats (TRMs) or similar, Chiquito Canyon/SR-126 culvert extension and storm drainage improvements.

At project buildout, off-site storm flows would continue to flow under SR-126 through existing culverts and through the site, and on-site runoff would continue to flow through the site to the river. The runoff, however, would be channeled through a stormwater conveyance system that would be constructed through the site down to the river. Three additional debris basins would be constructed within the tributary area north of SR-126 that would capture debris and sediment from runoff prior to its discharge under the SR-126 through the existing storm drains. (Runoff from the tributary area of the landfill already discharges into an existing debris basin.) Runoff from the developed portions of the Landmark Village site would be conveyed through a combination of grading, storm drainpipes, vegetated swales, catch basins, retention/detention basins, water quality basins, outlet structures, and debris basins. The proposed on-site drainage improvements are described below and their locations are illustrated in **Figure 4.2-6, Landmark Village Drainage Concept**.

Development on the tract map site is proposed on approximately 103.5 acres within the FEMA floodplain and on approximately 169 acres of the capital floodplain (see **Figure 4.2-3** and **Figure 4.2-7, Existing FEMA 100-Year and Capital Floodplain Delineations**). This development would be elevated a minimum of 1 foot above both floodplain elevations and, therefore, would not be subject to flood hazard from the river during the FEMA 100-year or LACDPW capital storm events. An additional 109 acres of encroachment into the FEMA floodplain boundaries are associated with bank improvements to protect against erosion downstream of the Landmark Village tract map site. Because a portion of the proposed development would be within the existing FEMA 100-year floodplain, adjustments to the FEMA published maps Flood Insurance Rate Maps (FIRMs) are required. These adjustments are administered by FEMA, and revisions to the mapping are made by applicants applying for a “Letter of Map Revisions” (LOMR). LOMRs are documents issued by FEMA that remove property and/or structures from special flood hazard areas. It is a commonly accepted practice, both nationwide and within Los Angeles County, to process revisions to the FEMA floodplain maps (i.e., LOMRs). The issuance of a LOMR would eliminate the property and/or structures from the applicable FEMA 100-year map. Any property and/or structures that are elevated above the FEMA 100-year floodplain zone are considered reasonably safe and free from flood hazard. Figure 4.4F in the PACE report (Recirculated Draft EIR **Appendix 4.2**) illustrates the proposed final FEMA 100-year floodplain zone, consistent with the proposed developed topography and proposed bank protection. The Conditional Letter of Map Revision (CLOMR) process would precede project construction and LOMR submittal.

Please see this EIR, **Section 4.4, Biota**, and **Section 4.5, Floodplain Modifications**, for a detailed discussion of the biotic and floodplain impacts for the 2-yr, 5-yr, 10-yr, 20-yr, 50-yr, 100-yr and capital flood events associated with the proposed bank stabilization. **Figure 4.2-6** illustrates the post-development drainage patterns for the Landmark Village tract map site. As required by the LACDPW, all on-site drainage systems carrying runoff from developed areas would be designed for the 25-year design storm (urban flood), while storm drains under major and secondary highways, open channels (main channels), debris carrying systems, and sumps would be designed for the 50-year capital flood.

The bank stabilization, stormwater drainage outlet structures, and the Long Canyon Road Bridge abutments and piers all represent construction within the river.

(1) Storm Drains

Storm drains (pipes and reinforced concrete boxes) designed for either the 25-year or 50-year capital storm would consist of both privately or publicly maintained systems (e.g., Homeowner Associations, Assessment Districts or the County of Los Angeles). The minimum publicly maintained mainline pipe size would be 18-inch connector pipes for clear flows.

(2) Open Channels

Small open channels would consist of rectangular and trapezoidal concrete channels and/or vegetated swales, and be designed for either the 25-year or 50-year capital storm, depending on the source of the runoff. The channels sized for the 50-year capital storm would have greater capacity than those sized for the 25-year storm.

(3) Low Flow Pipes and Outlets

To reduce pollution impacts from the low flow runoff, a series of pipes and outlets would be provided to intercept first flush runoff from developed portions of the tract map site. Pollutants expected to be generated on the site, their potential water quality impacts, and water quality control are addressed in this EIR, **Section 4.3, Water Quality**.

(4) Catch Basins

Catch basins would be provided to intercept flows beyond the 10- and 25-year storms and at strategic locations to minimize flooding at street intersections and at sump locations.

(5) Debris Basins

To reduce debris discharged through ~~and from~~ the tract map site, three additional debris basins north of SR-126 (and within Newhall Ranch) are proposed to intercept flows from undeveloped upland areas prior to their discharge under SR-126 and into the on-site storm system. The locations of these debris basins are illustrated in **Figure 4.2-6**.

(6) Erosion Control

Tract map-related erosion control that would occur in and adjacent to the river includes bank stabilization and various stormwater drainage outlet structures. Bank stabilization would be comprised of soil cement, rip-rap, and reinforced concrete. Bank protection would occur on portions of both the northern and southern ~~banks~~ sides of the river, as well as the northern and southern sides of the ~~bridge~~ Long Canyon Road Bridge. It may be buried or exposed (soil cement, reinforced concrete or rip-rap), and rip-rap may be grouted or not grouted. The intent of burying the soil cement is to resist scouring and it needs to be placed deep enough to resist scouring during a capital flood. TRMs or other suitable non-hardened bank protection is proposed along the northern riverbank between the Landmark Village site and the proposed water reclamation plant (WRP) site to protect the proposed utility corridor. These erosion control devices are discussed below under the **“Utility Corridor” subsection**. Additional bank protection (approved and included as part of the Natural River Management Plan) upstream of the Landmark Village project adjacent to the Old Road and downstream of the existing Valencia WRP is necessary to provide protection for the utility corridor.

(c) Long Canyon Road Bridge Abutment

Long Canyon Road Bridge over the Santa Clara River would include abutments and bank stabilization on the northern and southern sides of the bridge, which would protect against the erosive forces of the river. The bridge abutments would be approximately 500 linear feet of river length of reinforced concrete transitioning to soil cement through approximately 50-100 linear feet of rip-rap bank protection.

(d) Castaic Creek/SR-126 Bridge Abutments

The Castaic Creek/SR-126 Bridge is to be widened to three lanes in each direction. Concurrently, the existing bridge abutments would be widened and extend up to approximately 500 linear feet on both sides of Castaic Creek. The buried bank stabilization would tie into the abutment with an approximate 50–100 linear foot section of rip-rap.

b. Off-Site Improvements Outside of the Tract Map**(1) Adobe Canyon Borrow Site**

Grading in Adobe Canyon would involve grading and shaping of the hills and depressions that form the ridge separating Long and Adobe Canyons. Much of this work would occur along the top and bluffs of an unnamed plateau located just west of Sawtooth Ridge. The proposed grading would excavate the southeastern portion of this plateau creating a gentler slope leading up to the top of the ridge resulting in a manufactured slope angle ranging from 5:1 to 2:1 (horizontal/vertical). The grading would also alter the western facing slope leading up to the plateau creating a bench separated by two manufactured slopes stepping down the west facing ridgeline defining Adobe Canyon at a 3:1 grade. Additional earthwork is planned at the terminus of Adobe Canyon where a series of excavations would result in a manufactured slope at a relatively uniform 3:1 grade. A series of benches, swales and debris basins would also be constructed to collect, convey and release runoff in a controlled manner.

(2) Chiquito Canyon Grading Site

The Chiquito Canyon grading site, located just north of SR-126 and west of the intersection with Chiquito Canyon Road, is proposed on the ridgeline of a northeast-southwest trending hillside, which gently slopes toward the intersection in a “finger” shape. The terrain becomes progressively steeper and more rugged towards the northwestern portion of the ridge, with the peak elevation reaching 1,160 feet above mean sea level. The grading would lower the “finger” of land extending toward the intersection of Chiquito Canyon Road with SR-126 and create a manufactured slope at a uniform 3:1 grade. A series of benches, swales and debris basins would also be constructed to collect, convey and release runoff in a controlled manner.

to protect the utility corridor. The current bank protection material selection for this reach is soil cement; however, with the final design it may be determined that a geotextile-reinforced bio-engineered method could be adequate and, if so, the non-hardened solution would be utilized.

Newhall Land is currently in discussions with several of the utility agencies ~~who~~that will have infrastructure in the corridor. Prior to the project final map recordation, Newhall will finalize a maintenance agreement with an agency or some other entity (public or private – Homeowners Association (HOA), Center for Natural Land Management, Joint Power Authority, Landscape Maintenance District, etc.) for acceptance of the maintenance responsibility for bank protections for the Utility Corridor.

With the TRM (bio-engineered) slope protection along the Utility Corridor it is anticipated that there will be some limited maintenance activities related to vegetation replacement, removal of non-native species, removal of non-healthy plants, grading, replacement and/or repair of the TRM's. All of this work will take place within the limits of the project disturbance limits as analyzed in the project EIR. As part of the maintenance entity agreement Newhall will provide a Utility Corridor maintenance easement for repair activities along the Utility Corridor to the limits of project disturbance.

In the unlikely event that maintenance or repair beyond that described above is necessary and would include impacts outside the project disturbance limits (maintenance easement) analyzed in the project EIR's the appropriate permits and approvals would have to be obtained.

8. PROJECT IMPACTS

a. Significance Threshold Criteria

According to the County of Los Angeles *Environmental Document Reporting Procedures and Guidelines*, the County is concerned with any development that may be subject to flood hazards and debris flows, including (1) flooding due to the development's location within a major drainage course; (2) flooding due to the development's location within a floodplain; and (3) high debris transport and deposition potential.

Under Appendix G of the *State CEQA Guidelines*, a project would result in a significant flood impact if it would result in any of the following:

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site;

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; and/or
- Create the potential for inundation by seiche,⁴ tsunami,⁵ or mudflow.

The Landmark Village site and its tributary area are too far inland from the Pacific Ocean to be affected by inundation by either a seiche or tsunami. Furthermore, no large, continuously filled body of water exists within or in proximity to the project site or the tributary area that would be subject to a seiche. The impacts of project implementation, however, are discussed below for the remaining significance threshold criteria. Wherever pertinent, these thresholds are applied to project construction impacts. Wherever a significance threshold criterion is exceeded or there is the potential for a criterion to be exceeded, mitigation is identified that, if feasible, would reduce the potential impact to a less than significant level. This impact analysis focuses only on the potential flood impacts of the project from storm runoff. The potential water quality impacts of the project are addressed in this EIR, **Section 4.3, Water Quality**. The project's potential impacts to biological resources within and around drainages are addressed in this EIR, **Section 4.4, Biota**, and **Section 4.5, Floodplain Modifications**.

b. Construction Impacts

(1) Landmark Village Site (VTTM 53108)

The primary concern during construction of the proposed Landmark Village ~~project-tract map site~~ is potential erosion and sedimentation impacts during site clearing and grading, the placement of up to approximately 5.8 million cubic yards of fill on the tract map site, and excavation within the river to

⁴ A seiche (pronounced say'sh) is a wave on the surface of a lake or landlocked bay caused by atmospheric or seismic disturbances. The effect of a seiche may also be referred to as "sloshing," which occurred to many swimming pools in the San Fernando Valley during the 1994 Northridge earthquake.

⁵ A tsunami (pronounced soo-NAH-mee) is a series of waves of extremely long wave length and long period, generated in a body of water by an impulsive disturbance that displaces the water, such as an earthquake, landslide, or sub-marine volcanic eruption.

install the bank stabilization, construct the Long Canyon Road Bridge, and widen and extend ~~of~~ the Castaic Creek Bridge. After construction, the tract map site would largely be covered with impermeable surfaces and non-erodible surfaces, including landscape vegetation. Erosion and sedimentation caused by construction activities are dependent upon on climatic and site conditions, as well as the degree of soil disturbance during construction. Erosion within the creek and ~~streambed~~ riverbed would depend upon perennial and natural flows. Site clearing and grading operations, in particular, would have the greatest potential for discharging sediment downstream during storm events.

The proposed reinforced concrete and riprap at bridge abutments, in addition to the soil cement proposed as part of this project, would encroach into the existing 100-year floodplain in some areas. This action would trigger FEMA review in the form of the CLOMR/LOMR floodplain map revision process. Additionally, some banks located out of the floodplain need stabilization because of lateral migration of the riverbed, and the need to protect for the capital flood discharge. Construction of the soil cement bank protection represents a short-term construction-related disturbance as areas on the river side of the soil cement will be filled and re-vegetated.

Increases in sedimentation and debris production on the site, and erosion and sedimentation in the river and creek beds during construction, although temporary, would result in a significant impact without mitigation.

(2) Off-Site Grading

A primary concern ~~during the grading~~ of the Landmark Village ~~tract map project~~ site is potential erosion and sedimentation impacts during the clearing, excavation, ~~and grading, at~~ and export of cut material from the Adobe Canyon borrow site and the Chiquito Canyon grading site. These off-site grading and transport operations involve up to 7 million cubic yards for construction of the tract map site and the other related project components, and would have the greatest potential for the discharge of sediment downstream during storm events. Unless mitigated through erosion control and rapid soil stabilization at the completion of excavation and grading, increases in sedimentation and debris production during construction, although temporary, would result in a significant impact.

(3) Utility Corridor

Construction of the utility corridor would result in significant erosion and sedimentation impacts due to ~~as~~ the site grading, and borrow site excavation and grading, unless mitigated.

c. Operational Impacts

(1) Landmark Village Site (VTTM 53108)

(a) Substantial Alteration of an Existing Drainage Pattern

Implementation of the Landmark Village Drainage Concept Plan would allow runoff from the 996-acre tributary area (which is inclusive of the Chiquita Canyon Drainage) to collect in a storm drain system. Landmark Village does not propose to direct any flows to this drainage channel. Runoff would then gravity flow toward the river in a drainage pattern similar to existing conditions, where water flows have naturally formed paths of least resistance and concentrate at existing topographic depressions or cut channels through the site. Therefore, while the project would include development of the storm drain system and have predefined outlets to the river, existing drainage patterns would not be significantly altered.

The river would be encroached upon with placement of the buried soil cement, TRMs, bridge abutments and piers, rip-rap, gunitite, storm drain outlets, and energy dissipaters proposed by the project. Project impacts are expected to include localized erosion and increased localized sedimentation as a result of changes to river velocity and water surface elevation due to project impacts (see this EIR in **Section 4.5, Floodplain Modifications**, for a discussion of potential project impacts on location biological resources as a result of these improvements). The project would not affect overall discharges to the river because no discharge would be diverted from or to the river as a result of the proposed project.

Site Erosion

Once the project site is implemented as proposed, erosion is not anticipated to be a concern because it would largely be covered with impermeable and non-erodible surfaces and landscaping. Placement of the soil cement along the northern bank of the river would result in a long-term beneficial impact because the soil cement would stabilize the river's banks.

Riverbed Scouring and Floodplain

In-stream velocities are indicators of potential riverbed scouring. Potential for erosion within the river can be evaluated by reviewing changes to hydraulic shear stress or flow velocities, in conjunction with potentially erodible materials. In Los Angeles County, velocities are the preferred indicator for potential streambed erosion. Because the riverbed is composed of alluvial materials, the non-erodible velocities (velocities below which no erosion would occur) range from 2.5 fps (fine gravels under clear flow conditions) to 5.0 fps (alluvial silts transporting colloidal materials). Therefore, a representative velocity

of 4.0 fps was determined to be the appropriate indicator for potential erosion or scouring. In addition, a detailed capital fluvial analysis has been prepared to evaluate both existing and project conditions.

If a significant amount of the 2- to 100-year floodplain area were in the 0- to 4- fps range, but as a result of the project (including the Long Canyon Road Bridge and downstream bank protection), would be subjected to velocities greater than 4 fps, it would be considered to have a potentially significant erosion impact. Table 4.2 of the PACE August 2006 report indicates that flows in excess of 4 fps would be reduced by approximately -1.7, -4.5, -12.4, 0.1, 58.1, and 27.5 for the 2-, 5-, 10-, 20-, 50-, and 100-year storm events, respectively. The result of this slight decrease in riverbed area where velocities exceed 4 fps is an indication of a slightly more stable and less erosive condition. However, based upon the minor reductions in the area where the velocity exceeds 4 fps, it is more of an indication that there is not much change between the existing and project condition (proposed project floodplain fill and bank protection) from the riverbed scour perspective.

The overall decrease in floodplain area where the velocity is greater than 4 fps is due to the proposed excavation of existing agricultural field and increase in riverbed. The valuation of the total floodplain indicates (PACE August 2006 report) a -0.5, 0.4, 1.2 -33.9, -90.1, and -100.3 acres change for the 2-, 5-, 10-, 20-, 50-, and 100-year events, respectively. However, the largest reductions in floodplain acreage with flows in excess of 4 fps would be on land presently ~~used~~ used for agricultural purposes and that is proposed for conversion to residential and commercial uses.).

For high frequency floods (2-year, 5-year, and 10-year), the proposed floodplain modifications would not hinder flows or reduce the floodplain area. Instead, these flows would spread across the river channel unaffected by the bank protection because the river would have sufficient width to allow them to meander and spread out further than they would under pre-project conditions.

However, during more infrequent floods (20-year, 50-year and 100-year events), flows would spread out up to the buried soil cement. This would limit the area of the floodplain during these infrequent flood events, causing inundation over a smaller area because the bank protection would prevent flooding of formerly adjacent floodplain areas. These formerly adjacent areas would be developed under the Specific Plan for various land uses, including residential, commercial, industrial, and parks.

Table 4.3 of the PACE August 2006 report (Recirculated Draft EIR **Appendix 4.2**) shows that during the 100-year storm event, project-related improvements would result in 31 increased water surface elevation locations, with 10 exceeding 1 foot, and 21 decreased water surface elevation locations, with one exceeding 1 foot, in the river. No impacts to water surface elevation would be realized upstream or downstream of the project.

(b) Post-Development Drainages and Runoff Discharge for Off-Site Grading Areas

Adobe Canyon Borrow Site

Post-grading runoff flow rates for the Adobe Canyon borrow site are presented below in **Table 4.2-8, Post-Grading Drainages and Runoff Discharge – Adobe Canyon Borrow Site**. The post-development grading runoff quantities would total 352 cfs for the borrow site during a 50-year capital storm.

Table 4.2-8
Post-Grading Drainages and Runoff Discharge – Adobe Canyon Borrow Site

Sub-Basins	Acreage	Time of Conc. (minutes)	Q50u ¹ (cfs)	Q50b+d ² (cfs)	Q50bb+d ³ (cfs)	Qdesign ⁴ (cfs)
ADB-1A	28.0	12	35	46	67	46
ADB-2A	12.7	7	23	27	36	27
ADB-3A	29.5	12	29	39	39	39
ADB-4A	22.2	13	28	28	28	28
ADB-5A	25.2	11	36	36	36	36
ADB-6B	13.6	13	16	21	27	27
ADB-7B	28.7	26	21	30	38	38
ADB-9C	30.6	14	36	42	48	48
ADB-10C	8.8	6	17	21	27	27
ADB-11C	13.9	8	22	28	36	36
Totals	213.2		273	318	382	352

Source: PSOMAS, Off-Site Borrow Areas Drainage Concept (Recirculated Draft EIR Appendix 4.2) (Under Conditional Use Permit).

¹ Q50u - 50-year rainfall, unburned and unbulked (clear flow) runoff intensity

² Q50b+d - 50-year rainfall, burned and developed runoff intensity

³ Q50bb+d - 50-year rainfall, burned and bulked and developed runoff intensity

⁴ Qdesign - Runoff intensity includes burned and developed for Sub-basins 1A, 2A, 3A, 4A, 5A, 6B, 7B, 9C, 10C and 11C.A, plus burned and bulked and developed flow for Sub-basins 9A, 10A, plus developed for Sub-basins 7/8A, 11A, 12A.

A comparison of existing and post-grading peak discharge rates for the Adobe Canyon borrow site is provided below.

**Table 4.2-9
Comparison of Acreage and Discharge - Existing and Proposed Project
Adobe Canyon Borrow Site**

Acreage			Q ₅₀ (cfs)		
Existing	Proposed	Difference	Existing	Proposed	Difference
213	213	0	450	352	-98

Source: PSOMAS, Off-Site Borrow Areas Drainage Concept (Recirculated Draft EIR **Appendix 4.2**) (Under Conditional Use Permit)

As shown, there would be a 98 cfs (22 percent) reduction in runoff from the borrow site under post-graded conditions. This reduction in runoff would be a result of a reduced rate of runoff from the site allowing for greater infiltration, as well as the proposed debris basin that would capture sediment and debris before the runoff discharges off site. As a result of the grading, runoff from the Adobe Canyon borrow site would not result in downstream flooding and, therefore, impacts would be less than significant.

Chiquito Canyon Grading Site

Post-grading runoff flow rates for the Chiquito Canyon Borrow Site grading site are presented below in **Table 4.2-10, Post-Grading Drainages and Runoff Discharge – Chiquito Canyon Borrow Site**. The post-development grading runoff quantities would total 197 cfs for Chiquito Canyon during a 50-year capital storm.

**Table 4.2-10
Post-Grading Drainages and Runoff Discharge – Chiquito Canyon Borrow Site**

Sub-Basins	Acreage	Time of Conc. (minutes)	Q _{50u} ¹ (cfs)	Q _{50b+d} ² (cfs)	Q _{50bb+d} ³ (cfs)	Q _{design} ⁴ (cfs)
CQT-1/4A	23.9	9	37	41	46	41
CQT-5A	4.4	5	10	12	15	12
CQT-6A	22.6	15	25	31	39	31
CQT-7/8A B	6.2	5	14	14	14	14
CQT-9A B	31.8	14	27	44	52	52
CQT-10A C	14.5	11	20	23	27	27
CQT-11A C	7.4	21	11	11	11	11
CQT-12A C	4.4	12	9	9	9	9
Totals	115.2		163	185	213	197

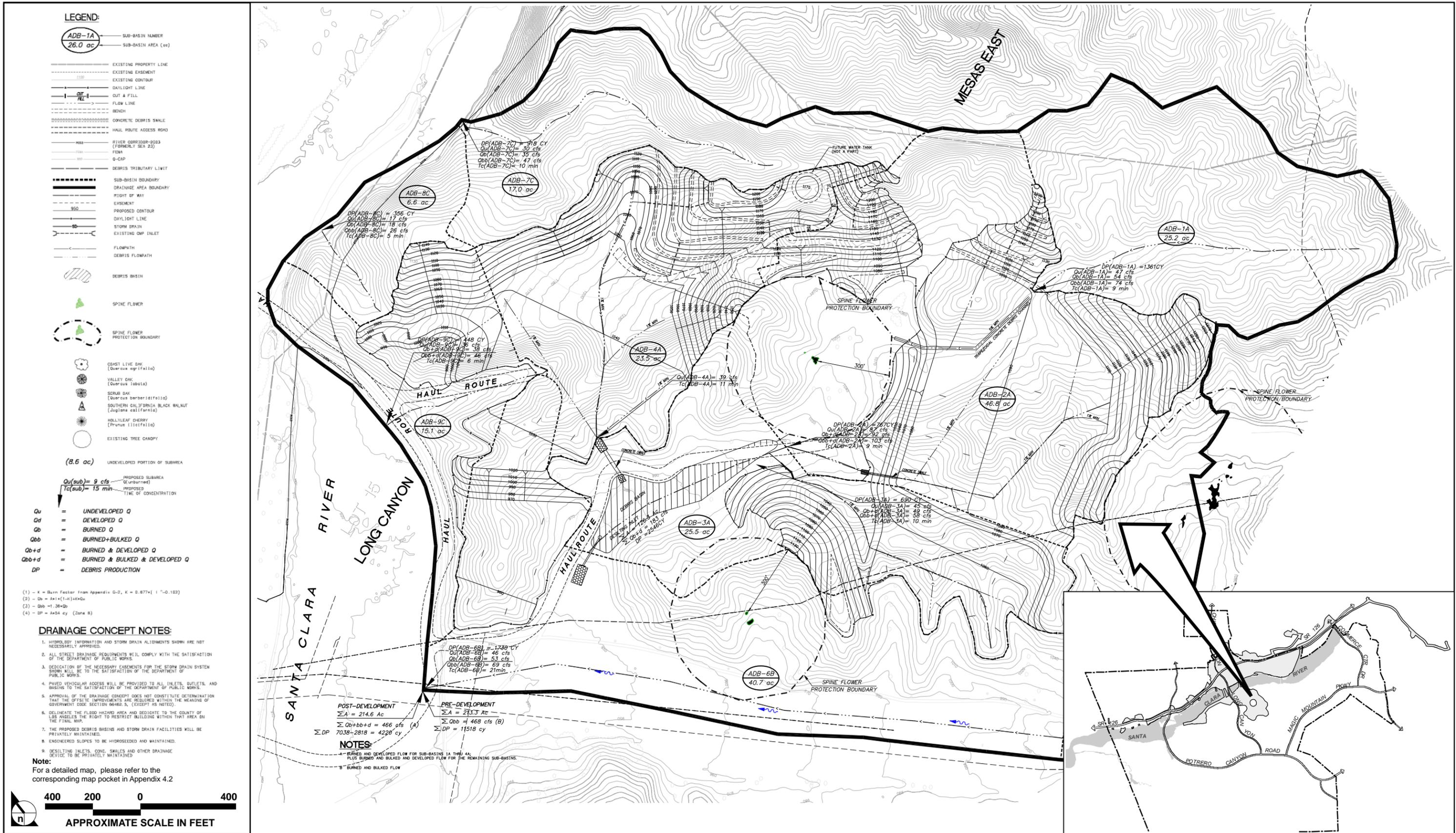
Source: PSOMAS, Off-Site Borrow Areas Drainage Concept (Recirculated Draft EIR **Appendix 4.2**) (Under Conditional Use Permit).

¹ Q_{50u} - 50-year rainfall, unburned and unbulked runoff intensity

² Q_{50b+d} - 50-year rainfall, burned and developed runoff intensity

³ Q_{50bb+d} - 50-year rainfall, burned and bulked and developed runoff intensity

⁴ Q_{design} - Runoff intensity includes burned and developed for Sub-basins 1/4A, 5A, 6A, plus burned and bulked and developed flow for Sub-basins 9A, 10A, plus developed for Sub-basins 7/8A, 11A, 12A.



LEGEND:

- ADB-1A
26.0 ac
- SUB-BASIN NUMBER
- SUB-BASIN AREA (ac)
- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING CONTOUR
- DAYLIGHT LINE
- CUT & FILL
- FLOW LINE
- BENCH
- CONCRETE DEBRIS SWALE
- HAUL ROUTE ACCESS ROAD
- RIVER QDRR100R-2003 (FORMERLY SEA 23)
- FEMA
- Q-CAP
- DEBRIS TRIBUTARY LIMIT
- SUB-BASIN BOUNDARY
- DRAINAGE AREA BOUNDARY
- RIGHT OF WAY
- EASEMENT
- PROPOSED CONTOUR
- DAYLIGHT LINE
- STORM DRAIN
- EXISTING QWP INLET
- FLOWPATH
- DEBRIS FLOWPATH
- DEBRIS BASIN
- SPINE FLOWER
- SPINE FLOWER PROTECTION BOUNDARY
- COAST LIVE OAK (Quercus agrifolia)
- VALLEY OAK (Quercus lobata)
- SCRUB OAK (Quercus berberidifolia)
- SOUTHERN CALIFORNIA BLACK WALNUT (Juglans californica)
- HOLLYLEAF CHERRY (Prunus ilicifolia)
- EXISTING TREE CANOPY
- (8.6 ac) UNDEVELOPED PORTION OF SUBAREA

$Q_u(sub) = 9 \text{ cfs}$
 $T_c(sub) = 15 \text{ min}$
 PROPOSED SUBAREA
 QU (unburned)
 PROPOSED
 TIME OF CONCENTRATION

Q_u = UNDEVELOPED Q
 Q_d = DEVELOPED Q
 Q_b = BURNED Q
 Q_{bb} = BURNED+BULKED Q
 Q_{b+d} = BURNED & DEVELOPED Q
 Q_{bb+d} = BURNED & BULKED & DEVELOPED Q
 DP = DEBRIS PRODUCTION

- (1) - K = Burn Factor from Appendix D-2, $K = 0.877(1 - 0.192)$
- (2) - $Q_b = A_b(1-K)KQ_u$
- (3) - $Q_{bb} = 1.38Q_b$
- (4) - $DP = A_b(4 \text{ cy (Zone B)})$

DRAINAGE CONCEPT NOTES:

1. HYDROLOGY INFORMATION AND STORM DRAIN ALIGNMENTS SHOWN ARE NOT NECESSARILY APPROVED.
2. ALL STREET DRAINAGE REQUIREMENTS WILL COMPLY WITH THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS.
3. DEDICATION OF THE NECESSARY EASEMENTS FOR THE STORM DRAIN SYSTEM SHOWN WILL BE TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS.
4. PAVED VEHICULAR ACCESS WILL BE PROVIDED TO ALL INLETS, OUTLETS, AND BASINS TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS.
5. APPROVAL OF THE DRAINAGE CONCEPT DOES NOT CONSTITUTE DETERMINATION THAT THE OFFSITE IMPROVEMENTS ARE REQUIRED WITHIN THE MEANING OF GOVERNMENT CODE SECTION 96462.5, (EXCEPT AS NOTED).
6. DELINEATE THE FLOOD HAZARD AREA AND DEDICATE TO THE COUNTY OF LOS ANGELES THE RIGHT TO RESTRICT BUILDING WITHIN THAT AREA ON THE FINAL MAP.
7. THE PROPOSED DEBRIS BASINS AND STORM DRAIN FACILITIES WILL BE PRIVATELY MAINTAINED.
8. ENGINEERED SLOPES TO BE HYDROSEEDED AND MAINTAINED.
9. DESILTING INLETS, CONC. SWALES AND OTHER DRAINAGE DEVICE TO BE PRIVATELY MAINTAINED.

Note:
For a detailed map, please refer to the corresponding map pocket in Appendix 4.2

POST-DEVELOPMENT
 $\sum A = 214.6 \text{ Ac}$
 $\sum Q_{b+bb+d} = 466 \text{ cfs (A)}$
 $\sum DP = 7038-2818 = 4220 \text{ cy}$

PRE-DEVELOPMENT
 $\sum A = 213.3 \text{ Ac}$
 $\sum Q_{bb} = 468 \text{ cfs (B)}$
 $\sum DP = 11518 \text{ cy}$

NOTES:
 A - BURNED AND DEVELOPED FLOW FOR SUB-BASINS 1A THRU 4A;
 PLUS BURNED AND BULKED AND DEVELOPED FLOW FOR THE REMAINING SUB-BASINS.
 B - BURNED AND BULKED FLOW

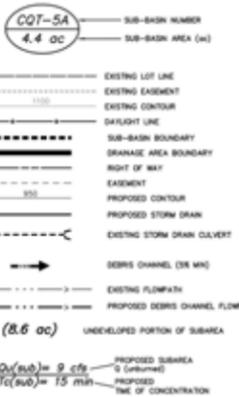
SOURCE: PSOMAS, Off-Site Borrow Areas Approved Drainage Concept Report (December 29, 2009).

(Revised) FIGURE 4.2-8

Post-Development Drainage Patterns – Adobe Canyon Borrow Site

Legend:

LEGEND:



Q_d = DEVELOPED Q
 Q_b = BURNED Q
 Q_{b+d} = BURNED+BULKED Q
 Q_{b+d+d} = BURNED & DEVELOPED Q
 Q_{b+b+d} = BURNED & BULKED & DEVELOPED Q
 DP = DEBRIS PRODUCTION
 Q_{cap} = FULL FLOW CAPACITY

DRAINAGE CONCEPT NOTES:

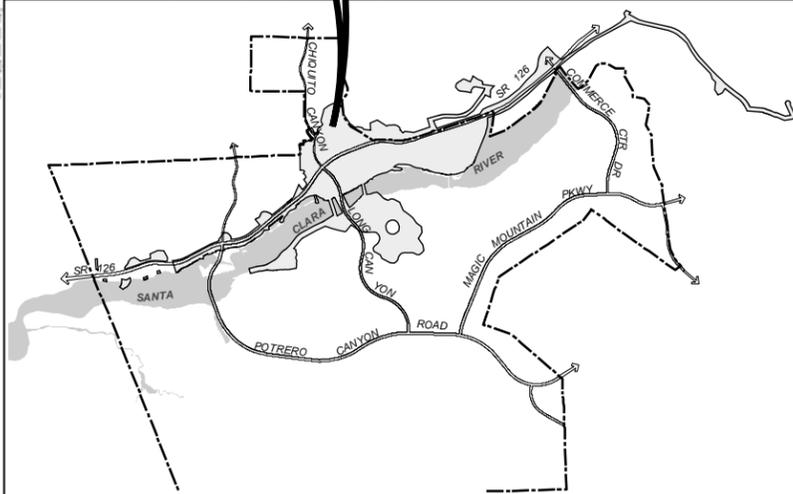
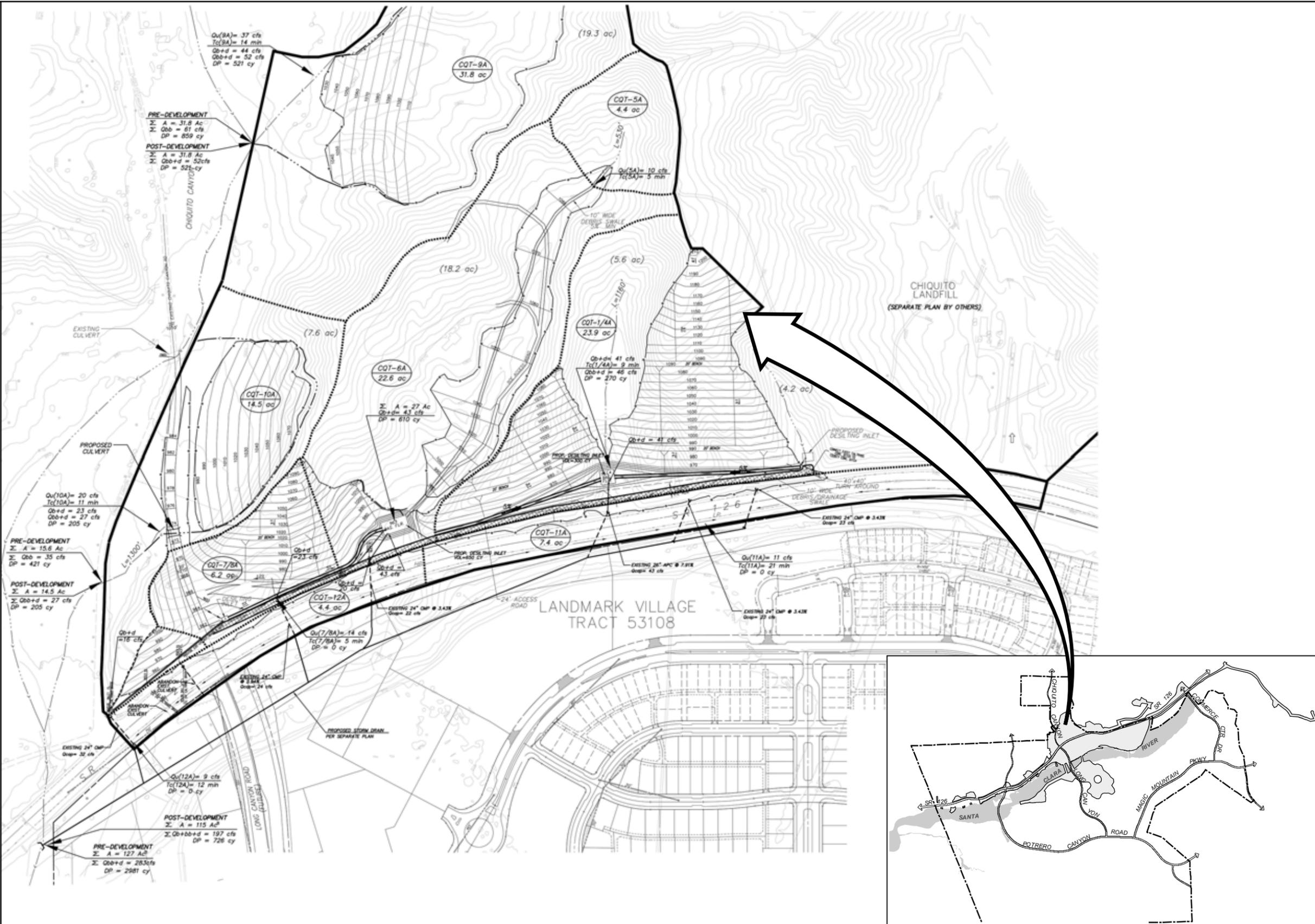
1. HYDROLOGY INFORMATION AND STORM DRAIN ALIGNMENTS SHOWN ARE NOT NECESSARILY APPROVED.
2. ALL STREET DRAINAGE REQUIREMENTS WILL COMPLY WITH THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS.
3. DEDICATION OF THE NECESSARY EASEMENTS FOR THE STORM DRAIN SYSTEM SHOWN WILL BE TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS.
4. PAVED VEHICULAR ACCESS WILL BE PROVIDED TO ALL INLETS, OUTLETS AND BASINS TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS.
5. APPROVAL OF THE DRAINAGE CONCEPT DOES NOT CONSTITUTE DETERMINATION THAT THE OFFER'S IMPROVEMENTS ARE REQUIRED WITHIN THE MEANING OF GOVERNMENT CODE SECTION 65461.5 (EXCEPT AS NOTED).
6. DELINEATE THE FLOOD HAZARD AREA AND DEDICATE TO THE COUNTY OF LOS ANGELES THE RIGHT TO RESTRICT BUILDING WITHIN THAT AREA ON THE FINAL MAP.
7. THE PROPOSED DEBRIS BASINS AND STORM DRAIN FACILITIES WILL BE MAINTAINED BY LOS ANGELES COUNTY.

PROPOSED CHIQUITO PROJECT DRAINAGE									
SUB-BASIN NUMBER	TIME OF CONCENTRATION (minutes)	INCIDENTAL SUB-BASINS							
		TIME OF CONCENTRATION (minutes)	AREA (acres)	Q_u (cfs)	Q_{b+d} (cfs)	Q_{b+b+d} (cfs)	DEBRIS PRODUCTION (CY)	PROP. DEBRIS PRODUCTION (CY)	Q_{cap} (cfs)
COT-1/4A	9	23.9	37	41	46	270	300	41	
COT-5A	5	4.4	10	12	15	119	12	12	
COT-7/8A	15	22.6	25	29	34	491	850	14	
COT-9A	9	8.2	14	14	14	0	0	14	
COT-10A	14	21.8	37	44	52	52	52	27	
COT-11A	11	14.5	23	27	27	205	0	11	
COT-12A	12	4.4	9	9	9	0	0	9	
Σ	Σ	Σ	Σ	Σ	Σ	Σ	Σ	Σ	
		115.3	163	185	213	1607		197	

$K =$ Run Factor from Appendix G-2, $K=0.877(10^{-0.0102})$
 $Q_b = KAP(1.49)^{0.775}$
 $Q_{b+d} = 1.49Q_b$
 $DP = 47(1) \text{ cy (DPA Zone 6)}$

NOTES:

- A. BURNED AND DEVELOPED FLOW FOR SUB-BASINS 1/4A, 5/A, PLUS BURNED AND BULKED AND DEVELOPED FLOW FOR SUB-BASINS 7/8A, 10A, PLUS DEVELOPED FLOW FOR SUB-BASINS 7/8A, 11A, AND 12A.
 - B. DRAINAGE TRIBUTARY AREA IS LESS THAN IN EXISTING CONDITION BECAUSE THE AREA SOUTH OF SR-126 PART OF LANDMARK VILLAGE DEVELOPMENT TRACT 53108 IN THE PROPOSED CONDITION.
 - C. AREAS COT-06 AND COT-10A DRAIN DIRECTLY TO CHIQUITO CANYON. EXISTING CONDITION IS MAINTAINED.
- Note:**
For a detailed map, please refer to the corresponding map pocket in Appendix 4.2



SOURCE: PSOMAS, Off-Site Borrow Areas (Under Conditional Use Permit) Drainage Concept (March 14, 2005).

(Revised) FIGURE 4.2-9

Post-Development Drainage Patterns – Chiquito Canyon Grading Site

A comparison of existing and post-grading peak discharge for the Chiquito Canyon grading site is provided below.

**Table 4.2-11
Comparison of Acreage and Discharge - Existing and Proposed Project
Chiquito Canyon Grading Site**

Acreage			Q ₅₀ (cfs)		
Existing	Proposed	Difference	Existing	Proposed	Difference
127	115	-12	283	197	-86

Source: PSOMAS, Off-Site Borrow Areas Drainage Concept (Recirculated Draft EIR Appendix 4.2) (Under Conditional Use Permit).

As shown, there would be an 86 cfs (30 percent) reduction in runoff from the Chiquito Canyon grading site under post-graded conditions. This reduction would be a result of reduced tributary watershed area ~~a reduced rate of runoff from the site allowing for greater infiltration~~, as well as the proposed debris basin that would capture sediment and debris before the runoff discharges off site. As a result of the grading, runoff from the Chiquito Canyon grading site would not result in downstream flooding and, therefore, impacts would be less than significant.

(c) Place Housing or Structures within a 100-Year Flood Hazard Area

Neither the Adobe Canyon borrow site nor Chiquito Canyon grading site would include housing or habitable structures, which are located within a 100-year flood hazard area; therefore, there would be no significant impacts due to the placement of housing or structures within a 100-year flood hazard area.

(d) Exposure to Significant Risk of Loss, Injury, or Death by Flooding or Mudflow

Grading in Adobe Canyon and Chiquito Canyon would be to standards established by the LACDPW (see **Section 4.1, Geotechnical and Soil Resources**) and all manufactured slopes would be stabilized through standard engineering practice and revegetation. Furthermore, the amount of runoff and debris flow from these sites would be less under post-graded conditions than under existing conditions, thereby reducing the potential for flood impact and mudflow to less than significant levels. As a result of these improvements, impacts resulting from exposure to significant risk of loss, injury, or death by flooding or mudflow would be less than significant.

(3) Utility Corridors**(a) Substantial Alteration of an Existing Drainage Pattern**

The proposed utility corridor contains three segments: a westerly segment of approximately 1,200 linear feet extending eastward from the proposed Newhall Ranch WRP (to be protected with soil cement or non-hardened bank protection to be determined with final design); a middle segment of 6,600 linear feet extending between the Chiquito and Grande tributaries (protected with TRMs or similar non-hardened bank protection methods); and the easterly segment that extends 2,000 linear feet to Round Mountain along The Old Road. The bank stabilization improvements associated with the eastern segment (protection with soil cement) were approved under the previously adopted Natural River Management Plan Section 404 Permit and Section 1603 Streambed Alteration Agreement for portions of the Santa Clara River and its tributaries (1998).

The analysis for the middle segment evaluated river flow velocities in the reach between Chiquito and Grande on the northern edge of the river corridor, STA 22010 to STA 17785. A uniform distance from the SR-126 road and the rail right-of-way area to the southern edge of the utility corridor was established for the entire reach. The horizontal location of the corridor was determined to be 67 feet from the rail right-of-way area to the edge of the utility corridor. At this location, a vertical levee was created in HEC-RAS to represent the boundary between the river and the utility corridor. The modeled levee affected the hydraulic geometry of 22 cross-sections in the reach from Chiquito west to Grande. One primary simulation was run in HEC-RAS, the Q_{cap} flood event (140,793 cfs), under a mixed flow regime and a mixed Manning's n conditions based on aerial photography analysis. Under these conditions, when the water surface elevation was high enough to reach the banks, the water velocities at the levee were very low, ranging from 0.8 to 4.1 fps. These modeled velocities are not to the level that would require hardened bank protection and so would not substantially alter the existing drainage patterns that could result in substantial erosion or siltation. In this case, approximately 6,600 linear feet of geotextile reinforced bio-engineered erosion protection (possibly TRMs) would be permanently placed on the bank to ensure protection from erosion.

(b) Result in Runoff Flow Rates in Excess of Existing or Planned Drainage Systems

The scope of the utility corridor and adjunct facilities is not such that it would result in runoff flow rates in excess of existing or planned drainage systems. Wherever a water tank is proposed on a graded pad, burned and bulked runoff from the pad would be reduced as a result of overcovering the pad with impervious materials and non-erosive vegetation. Furthermore, the water tank pad would be graded and

flattened, which would decrease the coefficient of runoff from the pads. As a result, there would be a net decrease in runoff and the impact of the utility corridor would be less than significant.

(c) Place Housing or Structures Within a 100-Year Flood Hazard Area

Most of the utility corridor would not be located within the existing 100-year flood hazard area and those improvements proposed within the Landmark Village site would be elevated above the 100-year and the 50-year capital floodplains. No portion of the utility corridor includes residential or habitable structures within a flood hazard area. As a result, there would be no impact relative to the utility corridor.

(d) Exposure to Significant Risk of Loss, Injury, or Death by Flooding or Mudflow

Construction of the utility corridor would be to standards set forth by the LACDPW. The utility corridor south of the SR-126 and within proposed "A" Street would be constructed within a trench that would be approximately 10 feet in width with some slope stabilization and remedial grading as necessary. Once the utilities are placed within the trench, the trench would be overcovered with soil, graded and compacted to blend in with existing grades, and revegetated or paved over. Upon completion, runoff from this portion the utility corridor would be channeled through catch basins and storm drains and discharged to the Santa Clara River. Runoff and debris flow would be equal to or less than existing conditions, and there would be no risk of loss, injury, or death. As a result, there would be a less than significant impact for the utility corridor south of the SR-126 and within proposed "A" Street.

The proposed project's water tank would be placed in a geologically stable location (see **Section 4.1, Geotechnical and Soil Resources**). All manufactured slopes in the immediate vicinity of the tank would be stabilized through standard engineering practice and revegetation. Furthermore, the amount of runoff and debris flow from the two off-site grading sites would be less under post-graded conditions than under existing conditions, thereby reducing the potential for flood impact to less than significant. As a result of these improvements, impacts associated with this criterion would be less than significant.

d. Conclusion

As shown in **Tables 4.2-7, 4.2-9, and 4.2-11**, there would be a total 220 cfs reductions in discharge from the tributary watersheds under post-development conditions, which includes: (1) a 36 cfs reduction in discharge from the Landmark Village tract map project site (including the Chiquito Canyon watershed and other tributary watersheds upstream from the Landmark Village project site (VTTM-53108); and (2) a 98 cfs reduction in discharge from the Adobe Canyon borrow site; and (3) an 86 cfs reduction in discharge from the Chiquito Canyon grading site. This reduction in discharge would be the result of reduced erosion of the site due to coverage of much of the site with pavement, roofs, vegetation, and

other non-erosive surfaces. It also would be largely the result of the proposed debris basins that would capture sediment and debris in upstream runoff and allow debris to settle out from the runoff before it would enter the storm system through the developed portion of the site. With these improvements in place, the project would reduce runoff flow rates through the site and into the Santa Clara River. Consequently, development of the proposed Landmark Village project, off-site grading, and construction of the utility corridor would result in less than significant impacts on drainage patterns because development would not substantially alter existing drainage patterns, significantly modify a drainage channel, or change the rate of flow, currents, or the course and direction of surface waters such that they would cause substantial erosion or siltation, or cause on-site or off-site flooding or mudflow.

Project impacts relative to excess runoff would be less than significant because post-construction and post-grading runoff flow rates would be less than existing conditions. Furthermore, all grading and drainage improvements would be consistent with LACDPW requirements and drainage improvements would be sized for either the 25-year urban or the capital storm events, depending on the source of runoff. As a result, the project would not create or contribute runoff in quantities that would exceed the capacity of existing or planned stormwater drainage systems.

Much of the western portion of the Landmark Village tract map site is within the FEMA 100-year floodplain and within the capital floodplain of the Santa Clara River. This portion of the site would be elevated above the capital floodplain and bank stabilization is proposed along the northern riverbank to protect the proposed improvements from risk of flood, loss, and injury or death. No housing or structures are proposed within ~~the either the Adobe Canyon borrow site or the Chiquito Canyon grading site~~ as part of this project. The water tank site would not be located within a flood hazard area. Grading and slope stabilization within the two off-site grading sites would be to standards set forth by the LACDPW, and neither site would be subject to flooding or mudflow. The project would not expose people or structures to a significant risk of loss, injury, or death as a result of inundation by a seiche or tsunami. Therefore, project impacts under would be less than significant.

9. MITIGATION MEASURES

Although the proposed Landmark Village project may result in potential flood control impacts absent mitigation, the County already has imposed mitigation required to be implemented as part of the Newhall Ranch Specific Plan. These mitigation measures, as they relate to flood control, are found in the previously certified Newhall Ranch Specific Plan Program EIR (March 8, 1999) and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). In addition, this EIR identifies recommended mitigation measures specific to the Landmark Village project site. The project applicant has committed to implementing the applicable mitigation measures from the Newhall Ranch Specific Plan and the mitigation measures recommended for the proposed Landmark Village project to ensure

4.3 WATER QUALITY

1. SUMMARY

This section has been revised to reflect a LID Performance Standard that has been adopted for the Project in response to comments received. The revised analysis presented herein is based on the Project's vesting tentative tract map, revised as of April 2010. Please see **Topical Response 12: Revised Project Design** for the revised analysis to other sections of this EIR. The revised or additional text is shown in double-underline; deleted text is shown in ~~strikeout~~. Revised or new figures or tables (if applicable) are indicated by the addition of the following text to the figure or table title: **(Revised)** or **(New)**.

This section is based on the revised Landmark Village Water Quality Technical Report and related appendices, prepared by Geosyntec Consultants (~~February 2008~~September 2011), and the "Landmark Village Draft Recirculated EIR Response to Comments, Topical Response 14: Water Quality" prepared by Geosyntec Consultants (2011). A copy of ~~this the Landmark Village Water Quality Technical Report report~~ is included in ~~Recirculated Draft EIR Appendix 4.3~~ of this Recirculated EIR. In addition, various materials and documents were used or referenced in connection with the preparation of this section. The documents are available for public review at the County of Los Angeles Department of Regional Planning and are incorporated by this reference. The report and this section focus on potential water quality impacts. For analysis of the potential hydrological impacts of the proposed project, please see **Section 4.2, Hydrology**.

The Landmark Village tract map site is presently under agricultural cultivation, and runoff is channeled via agricultural ditches to ultimately discharge into the river. Construction and operation of the Landmark Village project would replace agricultural runoff with urban runoff. The following summarizes the impacts of the pollutants of concern under wet- and dry-weather conditions in the post-developed conditions:

- **Sediments:** Municipal Separate Storm Sewer System (MS4) Permit, Construction General Permit, Dewatering General Permit, ~~and~~ Standard Urban Stormwater Mitigation Plan (SUSMP), and Low Impact Development (LID)-compliant Best Management Practices (BMPs) would be incorporated into the project to address sediment in both the construction phase and post-development. Mean total suspended solids concentration and load are predicted to be less in the post-development condition than under existing conditions. Turbidity in stormwater runoff would be controlled through implementation of a Construction Storm Water Pollution Prevention Plan (SWPPP) and would be permanently reduced through the stabilization of erodible soils with development. On this basis, the impact of the project on sediments is considered less than significant.
- **Nutrients (Phosphorus and Nitrogen [Nitrate+Nitrite-N, Ammonia-N, and Total Nitrogen]):** MS4 Permit, Construction General Permit, Dewatering General Permit, ~~and~~ SUSMP, and LID-compliant BMPs would be incorporated into the project to address nutrients in both the construction phase and post-development. Total phosphorus, nitrate-nitrogen plus nitrite-nitrogen, ammonia-nitrogen, and total nitrogen concentrations and loads are predicted to decrease in the post-developed condition and be within

the range of observed values in Santa Clara River Reach 5.¹ Nitrate-N plus nitrite-N and ammonia-N concentrations are predicted to decrease with development to a point well below the Los Angeles Regional Water Quality Control Board Basin Plan's objectives and total maximum daily load (TMDL) wasteload allocations. The predicted total nutrient concentrations are not expected to cause increased algal growth. On this basis, the impact of the project on nutrients is considered less than significant.

- Trace Metals:** MS4 Permit, Construction General Permit, General Dewatering Permit, ~~and~~ SUSMP, and LID-compliant BMPs will be incorporated into the project to address trace metals in both the construction phase and post-development. The mean annual loads and concentrations of dissolved copper, total lead, dissolved zinc, and total aluminum ~~concentration~~ are predicted to decrease with project development. ~~Although total aluminum loads are predicted to increase with development, m~~ Mean concentrations of dissolved copper, total lead, dissolved zinc, and total aluminum are predicted to be below benchmark Basin Plan objectives, California Toxics Rule (CTR) criteria, and the National Ambient Water Quality Criteria (NAWQC) criterion for aluminum. Cadmium is not expected to be present in material concentrations in runoff discharges from the project. On this basis, the impact of the project on trace metals is considered less than significant.
- Chloride:** MS4 Permit, Construction General Permit, Dewatering General Permit, ~~and~~ SUSMP, and LID-compliant BMPs would be incorporated into the project to address chloride in both the construction phase and post-development. The mean concentration of chloride would decrease with development, while the average annual load would increase slightly. The predicted concentration is well below the Los Angeles Basin Plan objective and is within the range of observed values in Santa Clara River Reach 5. Chloride is not a pollutant of concern in construction-related runoff. On this basis, the impact of the project on chloride is considered less than significant.
- Pesticides:** Pesticides in runoff may or may not increase with development as a result of landscape applications. Proposed pesticide management practices, including source control, removal with sediments in ~~treatment control~~ LID BMPs, and advanced irrigation control, would minimize the presence of pesticides in runoff. During the construction phase of the project, erosion and sediment control BMPs and source controls implemented per general Permit and general De-Watering Permit requirements would prevent pesticides associated with sediment from being discharged. Final site stabilization would limit mobility of legacy pesticides that may be present in pre-development conditions. On this basis, the impact of pesticides is considered less than significant.
- Pathogens:** Post-development pathogen sources include both natural and anthropogenic sources. The natural sources include bird and mammal excrement. Anthropogenic sources include leaking septic and sewer systems, and pet wastes. The project would not include septic systems, and the sewer system would be designed to current standards, minimizing the potential for leaks. Thus, pet wastes are the primary source of concern. Pathogens are not expected to occur at elevated levels during the construction phase of the project. The Project Design Features (PDFs) would include source controls and treatment controls, which in combination should reduce pathogen indicator levels in the post-development stormwater runoff. On this basis, the project's impact on pathogen and pathogen indicators is considered less than significant.
- Hydrocarbons:** Hydrocarbon concentrations would likely increase with development because of vehicular emissions and leaks. In stormwater runoff, hydrocarbons are often associated with soot particles that can

¹ The Santa Clara River is divided into reaches for purposes of establishing beneficial uses and water quality objectives. This EIR will utilize the Los Angeles Regional Water Quality Control Board (RWQCB) reach designations.

combine with other solids in the runoff. Such materials are subject to treatment in the proposed ~~extended detention basins, bioretention areas, and vegetated swales~~ LID BMPs. Source control BMPs incorporated in compliance with the MS4 Permit, the Construction General Permit, and the SUSMP also would minimize the presence of hydrocarbons in runoff. During the construction phase of the project, pursuant to the Construction General Permit, the Construction Stormwater Pollution Prevention Plan must include BMPs that address proper handling of petroleum products on the construction site, such as proper petroleum product storage and spill response practices, and those BMPs must effectively prevent the release of hydrocarbons to runoff per the Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology (BAT/BCT) standards. On this basis, the impact of the project on hydrocarbons is considered less than significant.

- Trash and Debris:** Trash and debris in runoff would likely increase with development. However, the project PDFs, including source control and ~~treatment~~ LID BMPs incorporated in compliance with the MS4 Permit, ~~and the SUSMP, and LID~~ requirements would minimize the adverse impacts of trash and debris. Source controls, such as street sweeping, public education, fines for littering, covered trash receptacles and storm drain stenciling, are effective in reducing the amount of trash and debris that is available for mobilization during wet weather. Trash and debris would be captured in catch basin inserts in the commercial area parking lots and in the ~~treatment control~~ LID PDFs. During the construction phase of the project, PDFs implemented per Construction General Permit and Dewatering General Permit requirements would remove trash and debris through the use of BMPs such as catch basin inserts and by general good housekeeping practices. Trash and debris are not expected to significantly impact receiving waters due to the implementation of the project PDFs.
- Methylene Blue Activated Substances (MBAS):** The presence of soap in runoff from the project would be controlled through source control PDFs, including a public education program on residential and charity car washing and the provision of a centralized car wash area directed to the sanitary sewer in the multi-family residential areas. Project source control PDFs will reduce the impacts of soaps in post-construction runoff. Other sources of MBAS, such as cross connections between sanitary and storm sewers, are unlikely given modern sanitary sewer installation methods and inspection and maintenance practices. During the construction phase of the project, equipment and vehicle washing would not use soaps or any other MBAS sources. Therefore, MBAS are not expected to significantly impact the receiving waters of the proposed project.
- Cyanide:** In addition to the expected relatively low level of cyanide in untreated stormwater, cyanide in runoff from the project would be readily removed by biological uptake, degradation by microorganisms, and by volatilization in the ~~treatment~~ LID PDFs. Therefore, cyanide is not expected to significantly impact the receiving waters of the proposed project.
- Bioaccumulation:** According to scientific literature, the primary pollutants that are of concern with regard to bioaccumulation are mercury and selenium. However, selenium and mercury are not of concern in this watershed, so bioaccumulation of selenium and mercury also is not expected to occur either during the construction or post-development project phases. On this basis, the potential for bioaccumulation in the Santa Clara River and adverse effects on waterfowl and other species is considered less than significant.
- Construction Impacts:** Construction impacts on water quality generally are caused by soil disturbance and subsequent suspended solids discharge, or by discharge of certain non-sediment-related pollutants, including construction materials (e.g., paint, stucco, etc); chemicals, liquid products, and petroleum products used in building construction or the maintenance of heavy equipment; and concrete-related pollutants. These impacts would be minimized through implementation of construction BMPs that would

meet or exceed measures required by the Construction General Permit, as well as BMPs that control the other potential construction-related pollutants (e.g., petroleum hydrocarbons and metals). A SWPPP specifying BMPs for the site that meet or exceed BAT/BCT standards would be developed as required by, and in compliance with, the Construction General Permit and Los Angeles County Standard Conditions. Erosion control BMPs, including but not limited to hydro-mulch, erosion control blankets, stockpile stabilization, and other physical soil stabilization techniques, also would be implemented to prevent erosion, whereas sediment controls, including but not limited to silt fencing, sedimentation ponds, and secondary containment on stockpiles, would be implemented to trap sediment and prevent discharge. Non-stormwater and construction waste and materials management BMPs (such as vehicle and equipment fueling and washing BMPs; nonvisible pollutant monitoring; and BMPs to manage materials, products, and solid, sanitary, concrete, hazardous, and hydrocarbon wastes) also would be deployed to protect construction site runoff quality. On this basis, the construction-related impact of the project on water quality is considered less than significant.

- **Regulatory Requirements:** *The proposed project satisfies MS4 Permit requirements for new development, including SUSMP and LID requirements ~~and Stormwater Quality Management Program (SQMP) requirements~~, and satisfies construction-related requirements of the Construction General Permit and General Dewatering Permit. Therefore, the project would comply with water quality regulatory requirements applicable to stormwater runoff.*

Finally, the proposed Landmark Village project, including proposed drainage and hydromodification controls, would not substantially alter the existing drainage pattern of the Santa Clara River in a manner that would cause substantial erosion, siltation, or channel instability; or substantially increase the rates, velocities, frequencies, duration, and/or seasonality of flows in a manner that causes channel instability or in a manner that harms sensitive habitats or species in the River. Therefore, the impact of the project on hydromodification is considered less than significant.

2. INTRODUCTION

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.2 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with the impacts to hydrology and water quality for the entire Specific Plan. The Newhall Ranch mitigation program was adopted by the County in findings and in the revised Mitigation Monitoring Plans for the Specific Plan and Water Reclamation Plant (WRP). The Specific Plan Program EIR concluded that Specific Plan implementation would result in significant impacts, but that the identified mitigation measures would reduce the impacts to below a level of significance. The EIR also determined that site-specific final hydrology and grading plans would be required as the Specific Plan is implemented through the application and processing of tentative subdivision maps for Newhall Ranch. All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan, the County of Los Angeles General Plan, and Santa Clarita Valley Area Plan.

This project-level EIR is tiering from the previously certified Specific Plan Program EIR. **Section 4.3** assesses the Landmark Village project's existing conditions, potential water quality impacts, the applicable mitigation measures from the Specific Plan Program EIR, and new project-specific mitigation measures recommended by this EIR for the Landmark Village project.

b. Definitions

Several terms and acronyms are identified below and used throughout this section of the EIR.

Acute Toxicity	A toxic effect that occurs immediately or shortly after a single, episodic exposure (four days or less).
ACOE	United States Army Corps of Engineers.
Basin Plan	California Regional Water Quality Control Board, Los Angeles Region, Water Quality Control Plan (Basin Plan) for the Los Angeles Region (dated 13 June 1994; approved 23 February 1995).
Beneficial Uses	The existing or potential uses of receiving waters in the permit area as designated in the Basin Plan. ²
Best Available Technology Economically Achievable (BAT)	A point source best management practice that reduces toxic (including heavy metals and man-made organics) and non-conventional (e.g., chloride, toxicity and nitrogen) pollutants in discharges.
Best Conventional Pollutant Control Technology (BCT)	A best management practice that reduces conventional pollutants (including Total Suspended Solids [TSS], oil and grease, fecal coliform, pH, and other pollutants) in discharges from construction sites.
Best Management Practices (BMPs)	In water pollution control, the best means available to control pollution of waterways from non-point sources, as opposed to best available technology, which applies to pollution control for point sources. BMPs include methods, measures, or practices designed and selected to reduce or eliminate the discharge of pollutants to surface waters from point and non-point source discharges, including stormwater. BMPs include structural and nonstructural controls, and operation and maintenance procedures, which can be applied before, during and/or after pollution producing activities. ³
<u>Biofiltration BMPs</u>	<u>LID BMPs designed principally to filter stormwater through media and/or vegetation.</u>

² RWQCBLAR Order No. 01-182, NPDES Permit No. CAS004001, Glossary section.

³ *Ibid.*

<u>Bioinfiltration BMPs</u>	<u>LID BMPs designed with retention and biofiltration components such that a portion of the design volume is retained and the remaining portion of the design volume is biofiltered and discharged.</u>
Bioretention	Bioretention areas are vegetated (<i>i.e.</i> , landscaped) shallow depressions that provide storage, infiltration, and evapotranspiration, and also provide for pollutant removal (<i>e.g.</i> , filtration, adsorption, nutrient uptake) by filtering stormwater through the vegetation and soils. In bioretention areas, pore spaces and organic material in the soils help to retain water in the form of soil moisture and promote the adsorption of pollutants (<i>e.g.</i> , dissolved metals and petroleum hydrocarbons) into the soil matrix. Plants utilize soil moisture and promote the drying of the soil through transpiration.
Capital Flood (Qcap)	Theoretical 50-year design storm assumed to occur over a drainage area that has been burned and that contributes debris to runoff. Use in flood control design is required by Los Angeles County for major systems and sump conditions.
Chronic Toxicity	A toxic effect that occurs after repeated or prolonged exposure.
CDFG	California Department of Fish and Game.
CTR	California Toxics Rule (40 C.F.R. Section 131.38).
CWA	The Federal Clean Water Act (33 U.S.C. Sections 1251 <i>et seq.</i>).
EMC	Event Mean Concentration, which is the average concentration of a pollutant in the runoff from a storm event, equal to the total mass of pollutant divided by the total volume of storm runoff.
ESA	Endangered Species Act (7 U.S.C. Section 136; 16 U.S.C. Sections 460 <i>et seq.</i>).
First Flush	The first storm event in the wet season typically has higher concentrations of pollutants due to accumulation during the dry months. Pollutants deposited onto exposed areas can be dislodged and entrained by runoff; therefore, the stormwater that initially runs off an area will be more polluted than the stormwater that runs off after the initial rainfall. The stormwater containing this high initial pollutant load is called the “first flush.” Storm events occurring later in the wet season will typically have lower concentrations as less time elapses between storm events and less accumulation occurs. In general terms, the water quality design storms defined by SUSMP approximate the first flush event (see SUSMP).
General MS4 Permit	Regional Water Quality Control Board, Los Angeles Region Order No. 01-182, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS004001 (December 13, 2001).

LACDPW	Los Angeles County Department of Public Works.
<u>LID</u>	<u>Low Impact Development (LID) is an approach for stormwater management that includes: minimizing impervious area/maximize permeability, minimizing directly connected impervious areas (DCIA), conserving natural areas, selecting appropriate building materials, protecting slopes and channels, and managing stormwater close to its source. The primary goals of the LID approach are to maintain a landscape functionally equivalent to pre-development hydrologic conditions and to minimize the generation of pollutants of concern. LID includes non-structural site design elements and structural BMPs (LID BMPs) at all project scales.</u>
<u>LID BMPs</u>	<u>Structural BMPs based on LID principles, including retention, bioinfiltration, and biofiltration. This term is used specifically to refer to engineered structural BMPs and is used to differentiate these BMPs from non-structural LID site design elements. LID BMPs provide treatment control of the stormwater that is captured and discharged.</u>
MEP	Maximum Extent Practicable, the standard established by Section 402(p) of the Federal Clean Water Act (33 U.S.C. Section 1342(p)) for the implementation of stormwater management programs to reduce pollutants in stormwater. CWA Section 402(p)(3)(B)(iii) requires that municipal permits “shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the administrator or the state determines appropriate for the control of such pollutants.” ⁴ This standard has been defined to include technical feasibility, cost, and benefit derived, with the burden being on the municipality to demonstrate compliance with MEP by showing that a BMP is not technically feasible in the locality or that BMPs costs would exceed any benefit to be derived. ⁵
MS4	Municipal Separate Storm Sewer System, a conveyance or system of conveyances (including roads with drainage systems, municipal streets, alleys, catch basins, curbs, gutters, ditches, manmade channels, or storm drains) owned by a state, city, county town or other public body, that is designed or used for collecting or conveying stormwater, which is not a combined sewer, which is not part of a publicly owned treatment works, and which discharges to “Waters of the U.S.” (See definition, below). ⁶
NAWQC	National Ambient Water Quality Criteria.

⁴ *Ibid.*

⁵ February 11, 1993 memorandum issued by the Office of Chief Counsel of the State Water Resources Control Board.

⁶ RWQCBLAR Order No. 01-182, NPDES Permit No. CAS004001, Glossary section.

Non-Storm Water Discharge	Any discharge to a storm drain that is not composed entirely of stormwater. ⁷
NPDES	National Pollutant Discharge Elimination System, the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits and imposing and enforcing pretreatment requirements, under Clean Water Act sections 307, 402, 318, and 405. ⁸
<u>Parcel-based LID BMPs</u>	<u>LID BMPs implemented at the scale of land use parcels, including retention, bioinfiltration, and biofiltration BMP types. Also referred to as Parcel-based BMPs.</u>
Receiving Waters	All surface water bodies in the Los Angeles region that are identified in the Basin Plan and to which the proposed project discharges. ⁹
<u>Regional Infiltration / Biofiltration Facilities</u>	<u>LID BMPs installed at the scale of project drainage areas, incorporating a combination of infiltration and biofiltration mechanisms. Designed based on the same principles as parcel-based LID BMPs.</u>
<u>Regional LID BMPs</u>	<u>LID BMPs implemented at the scale of project drainage areas, including regional infiltration facilities, bioinfiltration facilities, and biofiltration facilities. Also referred to as Regional Infiltration, Bioinfiltration, or Biofiltration Facilities.</u>
<u>Retention BMPs</u>	<u>LID BMPs designed to contain the design volume without discharging to the storm drain or surface waters unless this design volume is exceeded.</u>
RWQCB	Regional Water Quality Control Board, Los Angeles Region.
<u>Single Family HSCs</u>	<u>Hydrologic source controls (HSCs) specifically tailored to single family residential land uses, include disconnection of downspouts and impervious surfaces to landscaped areas, percolation trenches, and/or rain barrels. Considered to be a form of Parcel-based LID BMP.</u>
<u>Site Design</u>	<u>Non-structural site design elements of the LID stormwater management approach. This term is specifically used to differentiate these BMP types from engineered structural LID BMPs that are also part of the LID stormwater management approach.</u>

⁷ *Ibid.*

⁸ *Ibid.*

⁹ *Ibid.*

Source Control BMP	Any schedules of activities, prohibitions of practices, maintenance procedures, managerial practices, or operational practices that aim to prevent stormwater pollution by reducing the potential for contamination at the source of pollution. ¹⁰
SUSMP	The Los Angeles Countywide Standard Urban Stormwater Mitigation Plan, which addresses conditions and requirements of new development. ¹¹
SWRCB	State Water Resources Control Board.
SQMP	The Los Angeles Countywide Stormwater Quality Management Program, which includes descriptions of programs, collectively developed by the permittees under the General MS4 Permit in accordance with provisions of the NPDES Permit, to comply with applicable federal and state law, as the same is amended from time to time. ¹²
SWPPP	Storm Water Pollution Prevention Plan, a plan, as required by a State General Construction Activity Stormwater Permit, identifying potential pollutant sources, and describing the design, placement, and implementation of BMPs, to effectively prevent non-stormwater discharges and reduce pollutants in stormwater discharges during activities covered by the General Permit. ¹³
Structural BMP	Any structural facility designed and constructed to mitigate the adverse impacts of stormwater and urban runoff pollution. ¹⁴
TMDL	Total Maximum Daily Load, the sum of the individual wasteload allocations for point sources and load allocations for non-point sources, and natural sources that a water body may receive without compromising the designated beneficial use. ¹⁵ TMDLs are designated only for impaired (<i>i.e.</i> , Section 303(d) listed) water bodies and then only as necessary to address the impairment.
Treatment Control BMP	Any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption, or any other physical, biological, or chemical process ¹⁶ (see Structural BMP). <u>LID BMPs that treat and discharge stormwater are considered to be treatment control BMPs, however not all treatment control BMPs are characterized as LID BMPs.</u>

¹⁰ *Ibid.*

¹¹ *Ibid.*

¹² *Ibid.*

¹³ *Ibid.*

¹⁴ *Ibid.*

¹⁵ *Ibid.*

¹⁶ *Ibid.*

US EPA	United States Environmental Protection Agency.
USFWS	United States Fish and Wildlife Service.
Vegetated Swales	Vegetated swales are vegetated channels specifically designed to remove particulates and to reduce the velocity of runoff through the storm system. Swales typically provide low to moderate treatment efficiencies and are mainly effective at removing debris and solid particles. Vegetated swales also help minimize overland and concentrated flow depths and velocities.
Water Quality Detention Basins	Impoundments where stormwater temporarily is detained, allowing sediment, and particulates to settle out. The basins collect litter, total suspended solids, settleable solids and pollutants that are attached (adsorbed) to the settled particulate matter. The basins can be designed as either above ground lined or unlined basins, or as underground storage facilities.
Waters of the U.S.	All waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide; all interstate waters including interstate wetlands; all other waters, such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters (1) which are or could be used by interstate or foreign travelers for recreational or other purposes; or (2) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (3) which are used or could be used for industrial purposes by industries in interstate commerce. Also included are all impoundments of waters otherwise defined as “waters of the U.S.” under the definition; tributaries of water identified above; the territorial seas; and wetlands adjacent to waters (other than the waters that are themselves wetlands) identified above. ¹⁷ By ACOE definition, “waters of the US” are defined by the ordinary high water mark, which can be identified by physical characteristics, such as channel scouring, bank shelving, areas cleared of terrestrial vegetation, litter and debris, or other indications that may be appropriate.
Wetlands	Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. ¹⁸

¹⁷ 33 C.F.R. Part 328.3a.

¹⁸ *Ibid.*

etc.), along with water quality criteria necessary to support those uses. Water quality criteria are prescribed concentrations or levels of constituents—such as lead, suspended sediment, and fecal coliform bacteria—or narrative statements that represent the quality of water that support a particular use. Because California did not establish a complete list of acceptable water quality criteria, the US EPA established, in the CTR, numeric water quality criteria for certain toxic constituents in receiving waters with human health or aquatic life designated uses in the form of the. (See 40 C.F.R. Section 131.38.)

(a) CWA Section 303(d) – TMDLs

When designated beneficial uses of a particular receiving water body are compromised by water quality, Section 303(d) of the CWA requires listing that water body as “impaired.” Once a water body has been deemed impaired, a TMDL must be developed for the impairing pollutant(s). A TMDL is an estimate of the total load of pollutants from point, non-point, and natural sources that a water body may receive without exceeding applicable water quality standards (with a “factor of safety” included). Once established, the TMDL allocates the loads among current and future pollutant sources to the water body.

The Landmark Village project would discharge stormwater runoff to Santa Clara River Reach 5. **Table 4.3-1, 2006-2010 CWA Section 303(d) Listings for the Santa Clara River Main Stem**, lists the water quality impairments for the Santa Clara River main stem, as reported in the 2006-2010 CWA Section 303(d) list of water quality limited segments, including reaches upstream of the project location, at and downstream of the project location. ~~Table 4.3-2, 2006 CWA Section 303(d) List of Water Quality Limited Segments Being Addressed By US EPA Approved TMDLs, lists the water quality limited segments that are being addressed by US EPA approved TMDLs, as reported on the 2006 CWA Section 303(d) list, at and downstream of the project location.~~ Reach 7 of the Santa Clara River (Bouquet Canyon Road to above Lang Gaging Station) is listed for coliform bacteria. Reach 6 (West Pier Highway 99 to Bouquet Canyon Road) is listed for coliform bacteria, chlorpyrifos, diazinon, toxicity, iron, and copper. Reach 5 of the Santa Clara River is listed for coliform bacteria and and ironfor chloride as “being addressed. Santa Clara River Reach 3, approximately 25 miles downstream of the project location and below the Dry Gap in Reach 4, is listed for total dissolved solids (TDS) and toxicity. Santa Clara River Reach 1, approximately 30 miles downstream of the project location, is listed for toxicity. The Santa Clara River estuary, located approximately 40 miles downstream of the project location, is listed for coliform, chlorinated legacy pesticides, Toxaphene, toxicity, and nitrate-nitrogen. ~~Downstream segments of the River, below the dry gap in Reach 4, are listed for total dissolved solids (TDS), toxicity, coliform bacteria, chlorinated legacy pesticides, and Toxaphene. Reach 3 is listed for ammonia and chloride as “being addressed.”~~

The RWQCB has adopted nitrogen compounds (nitrate-nitrogen plus nitrite-nitrogen and ammonia) ~~and chloride, and indicator bacteria~~ TMDLs in the Basin Plan. **Table 4.3-2, 2010 CWA Section 303(d) List of Water Quality Limited Segments Being Addressed By EPA Approved TMDLs**, lists the 2010 Section 303(d) List of Water Quality Limited Segments Being Addressed by EPA Approved TMDLs. The Indicator Bacteria TMDL, adopted by the Regional Board on July 8, 2010, must be submitted for review and approval to the SWRCB, the State Office of Administrative Law, and the U.S. EPA. The wasteload allocations for stormwater discharges into Reach 5 of the Santa Clara River are summarized in **Table 4.3-3, TMDL Wasteload Allocations for MS4 and Stormwater Sources to Santa Clara River Reach 5.** Pollutant reductions are regulated through effluent limits prescribed in Publicly Owned Treatment Works (POTW) and minor point source NPDES Permits, BMPs required in NPDES MS4 Permits, and SWRCB Management Measures for non-point source discharges. ~~The RWQCB has not adopted a TMDL for coliform in Reach 5.~~

Table 4.3-1
2006-2010 CWA Section 303(d) Listings for the Santa Clara River Main Stem

River Reach or Tributary ¹	Geographic Description and Distance from Project to Upstream End of Reach	Pollutants	303(d) List Proposed TMDL Completion	Potential Sources
<u>7</u>	<u>Bouquet Canyon Rd to above Lang Gaging Station (5 miles upstream)</u>	<u>Coliform Bacteria</u>	<u>2019²</u>	<u>Nonpoint and Point Sources</u>
<u>6</u>	<u>West Pier Hwy 99 to Bouquet Cyn Rd (Directly upstream of Project site)</u>	<u>Coliform Bacteria</u> <u>Chlorpyrifos</u> <u>Diazinon</u> <u>Toxicity</u> <u>Iron</u> <u>Copper</u>	<u>2019²</u> <u>2019</u> <u>2019</u> <u>2019</u> <u>2021</u> <u>2021</u>	<u>Source Unknown</u> <u>Nonpoint and Point Sources</u> <u>Source Unknown</u> <u>Source Unknown</u> <u>Source Unknown</u> <u>Nonpoint and Point Sources</u>
5	Blue Cut Gaging Station to West Pier Hwy 99 (Project location)	High Coliform Count <u>Iron</u>	2019 ² <u>2021</u>	Nonpoint and Point Sources <u>Source Unknown</u>
3	Freeman diversion dam to "A" street ² (25 miles)	Total Dissolved Solids <u>Toxicity</u>	2019 ⁵ <u>2021</u>	Nonpoint and Point Sources <u>Source Unknown</u>
1	Estuary to Highway 101 Bridge (30 miles)	Toxicity	2019	Source Unknown
--	Estuary (40 miles)	ChemA ³ Coliform Toxaphene <u>Toxicity</u> <u>Nitrate</u>	2019 2019 2019 <u>2019</u> <u>2021</u>	Source Unknown Nonpoint Source Nonpoint Source <u>Source Unknown</u> <u>Source Unknown</u>

Source: Geosyntec, 2008.

¹ ~~Santa Clara River reaches upstream of the Specific Plan area have not been included.~~

² Reach 3 is downgradient of the "dry gap" in Reach 4.

² Indicator Bacteria TMDL adopted by LARWQCB in July 2010; not yet approved by SWRCB and U.S. EPA.

³ ChemA suite of chlorinated legacy pesticides include: Aldrin, chlordane, Dieldrin, Endosulfan I/II, Endrin, gamma-BHC, heptachlor, heptachlor epoxide, and Toxaphene.

Table 4.3-2
2010 CWA Section 303(d) List of Water Quality Limited Segments Being Addressed by US EPA Approved TMDLs

Water Body Name	Pollutants	Potential Sources	US EPA Approved TMDL
<u>Santa Clara River Reach 6</u>	<u>Ammonia</u> <u>Chloride</u>	<u>Nonpoint/Point Source</u> <u>Nonpoint/Point Source</u>	<u>2004</u> <u>2005</u>
Santa Clara River Reach 5	Chloride	Nonpoint/Point Source	2005
Santa Clara River Reach 3	Ammonia Chloride	Nonpoint/Point Source Nonpoint/Point Source	2004 <u>2002</u> 2002

**Table 4.3-3
TMDL Wasteload Allocations for MS4 and Stormwater Sources to Santa Clara River Reach 5**

Impairing Pollutant	Numeric Water Quality Objective			Wasteload Allocation
Chloride	100 mg/L.			<p>Wasteload allocations have been adopted for the Saugus WRP and the Valencia WRP. Other NPDES discharges contribute a minor chloride load. The wasteload allocation for these point sources is 100 mg/L.</p> <p>The source analysis indicates that non-point sources are not a major source of chloride. The load allocations for non-point sources is 100 mg/L.</p>
Nitrogen Compounds	<p>The numeric target for nitrogen in this TMDL is based on achieving the existing nitrogen water quality objective of 5 mg/L NO₃-N + NO₂-N. (Note: the numeric target that is used to calculate the wasteload allocations includes a 10% margin of safety; thus the numeric target is 4.5 mg/L NO₃-N + NO₂-N.)</p> <p>The water quality objective for ammonia in Reach 5 used in the nitrogen compounds TMDL was based on temperature and pH for different River segments within the reach:</p>			<p>Concentration-based wasteloads are allocated to municipal, industrial and construction stormwater sources regulated under NPDES permits. For stormwater permittees discharging into Reach 5, the following wasteload allocations apply:</p> <p>30-day average nitrate plus nitrite = 6.8 mg/L (NO₃-N+NO₂-N)</p> <p>1-hour average ammonia = 5.2 mg/L (NH₃ as N)</p> <p>30-day average ammonia = 1.75 mg/l (NH₃ as N)</p>
	Ammonia Water Quality Objective (mg/L as N)¹			
		1-hour average	30-day average	
	Reach 5 at County Line	3.4	1.2	
	Reach 5 below Valencia	5.5	2.0	
Reach 5 above Valencia	4.8	2.0		

Impairing Pollutant	Numeric Water Quality Objective	Wasteload Allocation																		
<p><u>Indicator Bacteria (Resolution R10-006)</u></p>	<p>Numeric Targets:</p> <table border="1"> <thead> <tr> <th>Constituent</th> <th>SCR Reach 5 Requirement</th> </tr> </thead> <tbody> <tr> <td>E. Coli (Single Sample)</td> <td>235/100 mL</td> </tr> <tr> <td>E. Coli (Geometric Mean)</td> <td>126/100 mL</td> </tr> </tbody> </table>	Constituent	SCR Reach 5 Requirement	E. Coli (Single Sample)	235/100 mL	E. Coli (Geometric Mean)	126/100 mL	<p><u>Wasteload Allocations are given in terms of allowable exceedance days. The numeric targets may not be exceeded more than the number of allowable exceedance days allotted in the tables below.</u></p> <p>Interim Allowable Exceedance Days (Enforceable 4 years after effective date of TMDL):</p> <table border="1"> <thead> <tr> <th>Time Period</th> <th>Santa Clara River Reach 5</th> </tr> </thead> <tbody> <tr> <td><u>Dry Weather</u></td> <td>17 allowable exceedance days of single sample objectives.</td> </tr> <tr> <td><u>Wet Weather</u></td> <td>61 allowable exceedance days of single sample objectives;</td> </tr> </tbody> </table> <p>Allowable Exceedance Days (Dry Weather enforceable 11 years after effective date of TMDL; Wet Weather enforceable 17 years after effective date of TMDL):</p> <table border="1"> <thead> <tr> <th>Time Period</th> <th>Santa Clara River Reach 5</th> </tr> </thead> <tbody> <tr> <td><u>Dry Weather</u></td> <td>5 allowable exceedance days of single sample objectives; 0 allowable exceedances of geometric mean objectives</td> </tr> <tr> <td><u>Wet Weather</u></td> <td>16 allowable exceedance days of single sample objectives; 0 allowable exceedances of geometric mean objectives</td> </tr> </tbody> </table>	Time Period	Santa Clara River Reach 5	<u>Dry Weather</u>	17 allowable exceedance days of single sample objectives.	<u>Wet Weather</u>	61 allowable exceedance days of single sample objectives;	Time Period	Santa Clara River Reach 5	<u>Dry Weather</u>	5 allowable exceedance days of single sample objectives; 0 allowable exceedances of geometric mean objectives	<u>Wet Weather</u>	16 allowable exceedance days of single sample objectives; 0 allowable exceedances of geometric mean objectives
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Source: Geosyntec, ~~2008~~2011

¹ The numeric targets are 10 percent smaller, to incorporate a margin of safety.
mg/L = milligrams per liter.

(b) Standard Urban Stormwater Mitigation Plan

On March 8, 2000, the development planning program requirements, including the SUSMP requirements (collectively, SUSMP requirements), were approved by the RWQCB as part of the MS4 program to address stormwater pollution from new construction and redevelopment. The SUSMP contains a list of minimum BMPs that must be employed to infiltrate or treat stormwater runoff, control peak flow discharge, and reduce the post-project discharge of pollutants from stormwater conveyance systems. The SUSMP defines, based upon land use type, the types of practices that must be included and issues that must be addressed as appropriate to the development type and size. Compliance with SUSMP requirements is used as one method to evaluate significance of project development impacts on surface water runoff.

Finalized in May 2000, the County of Los Angeles' *Manual for the Standard Urban Stormwater Mitigation Plan* (Manual) details the requirements for new development and significant redevelopment BMPs. The Manual is a model guidance document for use by permittees and individual project owners to select post-construction BMPs and otherwise comply with the SUSMP requirements. It addresses water quality and drainage issues by specifying design standards for structural or treatment control BMPs that infiltrate or treat stormwater runoff and control peak flow discharge. BMPs are defined in the Manual and SUSMP requirements as any program, technology, process, sizing criteria, operational methods or measures, or engineered systems, which, when implemented, prevent, control, remove or reduce pollution. Treatment BMP sizing criteria and design guidance also are contained in the MS4 Permit, the Manual, the *Technical Manual for Stormwater Best Management Practices in the County of Los Angeles*, issued by the LACDPW in February 2004, (LACDPW, 2004. Los Angeles County 1994-2005 Integrated Receiving Water Impacts Report Final Report - August 2005.), and the County's Low Impact Development Standards Manual (January 2009).²²

One of the most important requirements within the SUSMP is the specific sizing criteria for stormwater treatment BMPs for new development and significant redevelopment projects. The SUSMP includes sizing criteria for both volume-based and flow-based BMPs. The sizing criteria options for volume-based BMPs, such as ~~extended detention~~ infiltration basins, are as follows:

1. The 85th percentile, 24-hour runoff storm event determined as the maximized capture stormwater volume for the area, from the formula recommended in Urban Runoff Quality Management, Water Environment Federation (WEF) 1998 Manual of Practice No. 23/ASCE Manual of Practice No. 87;

²² The County's Low Impact Development Standards Manual (January 2009), http://www.ladpw.com/wmd/LA_County_LID_Manual.pdf.

(6) Los Angeles County Low Impact (LID) Development Ordinance

Chapter 12.84 of the Los Angeles County Municipal Code requires the use of LID standards in development projects. Chapter 12.84 requires that applicable development projects:

- Mimic undeveloped stormwater and urban runoff rates and volumes in any storm event up to and including the “50-year capital design storm event,” as defined by LACDPW;
- Prevent pollutants of concern from leaving the development site in stormwater as the result of storms, up to and including a water quality design storm event; and
- Minimize hydromodification impacts to natural drainage systems.

To meet these standards, development projects that consist of five or more residential units, or nonresidential development, shall comply with the following:

- The excess volume (defined as the post-developed runoff volume minus the pre-developed runoff volume for the 85th percentile storm event) from each lot upon which such development is occurring shall be infiltrated at the lot level, or in the alternative, the excess volume from the entire development site, including streets and public right-of-way, shall be infiltrated in sub-regional facilities. The tributary area of a sub-regional facility shall be limited to 5 acres, but may be exceeded with approval of the Director of LACDPW. When infiltration of all excess volume is not technically feasible, on-site storage, reuse, or other water conservation uses of the excess volume is required and shall be implemented as authorized by the Director of LACDPW.

LACDPW has developed a LID Standards Manual that outlines stormwater runoff quantity and quality control development principles, technologies, and design standards for achieving the LID Standards of Chapter 12.84. The LID Standards Manual requires that large scale residential and nonresidential development projects prioritize the selection of BMPs to treat stormwater pollutants, reduce stormwater runoff volume, and promote groundwater infiltration and stormwater reuse in an integrated approach to protecting water quality and managing water resources. The Manual states that BMPs should be implemented in the following order of preference:

1. BMPs that promote infiltration.
2. BMPs that store and beneficially use stormwater runoff.
3. BMPs that utilize the runoff for other water conservation uses including, but not limited to, BMPs that incorporate vegetation to promote pollutant removal and runoff volume reduction and integrate multiple uses, and BMPs that percolate runoff through engineered soil and allow it to discharge downstream slowly.

If compliance with the above LID requirements is technically infeasible, in whole or in part, the project must incorporate design features demonstrating compliance with the LID requirements to the maximum extent practicable. The LID goals of increasing groundwater recharge, enhancing water quality, and preventing degradation to downstream natural drainage courses would be considered by LACDPW in the determination of infeasibility.

The LID Standards Manual outlines site conditions where infiltration may not be possible:

- Locations where seasonal high groundwater is within 10 feet of the surface.
- Within 100 feet of a groundwater well used for drinking water.
- Brownfield development sites or other locations where pollutant mobilization is a documented concern.
- Locations with potential geotechnical hazards as outlined in a report prepared and stamped by a licensed geotechnical engineer.
- Locations with natural, undisturbed soil infiltration rates of less than 0.5 inch per hour that do not support infiltration-based BMPs.
- Locations where infiltration could cause adverse impacts to biological resources.
- Development projects in which the use of infiltration BMPs would conflict with local, state, or federal ordinances or building codes.
- Locations where infiltration would cause health and safety concerns.

The LID Standards Manual outlines where storage and reuse of the excess volume may not be possible:

- Projects that would not provide sufficient irrigation or (where permitted) domestic grey water demand for use of stored runoff due to limited landscaping or extensive use of low water use plant palettes in landscaped areas.
- Projects that are required to use reclaimed water for irrigation of landscaping.
- Development projects in which the storage and reuse of stormwater runoff would conflict with local, state, or federal ordinances or building codes.
- Locations where storage facilities would cause potential geotechnical hazards as outlined in a report prepared and stamped by a licensed geotechnical engineer.
- Locations where storage facilities would cause health and safety concerns.

The LID Standards Manual also contains drainage analysis requirements for hydromodification impacts to off-site property. Although project applicants must still demonstrate that the project mitigates for hydromodification impacts to the satisfaction of the Director of Public Works, the LID Standards Manual provides for the following exemptions from conducting a full analysis for hydromodification impacts:

- Projects that disturb less than 1 acre.
- Less than 10,000 square feet of new impervious area.
- Projects that do not increase impervious area or decrease the infiltration capacity of pervious areas compared to pre-project conditions.
- Projects that are replacement, maintenance, or repair of an existing permitted flood control facility.
- Projects within a watershed or subwatershed where a geomorphically based watershed study has been prepared that establishes that the potential for hydromodification impacts is not present based on appropriate assessment and evaluation of relevant factors, including: runoff characteristics, soil conditions, watershed size and conditions, channel conditions, and proposed levels of development within the watershed.
- Projects that discharge directly or via a storm drain into concrete or significantly hardened channels, which in turn discharge into a sump area under tidal influence, or other receiving water that is not susceptible to hydromodification impacts.
- Projects that have hydrologic control measures that include sufficient subregional, regional, in-stream control measures, or a combination thereof such that hydromodification will not occur.

(7) Construction Permits

Pursuant to CWA Section 402(p), which requires regulations for permitting of certain stormwater discharges, the SWRCB has issued a statewide general NPDES Permit and Waste Discharge Requirements for stormwater discharges from construction sites (NPDES No. CAS000002). (See California Water Resources Control Board Resolution No. 2001-046; Modification of Water Quality Order 99-08-DWQ SWRCB NPDES General Permit for Stormwater Discharges Associated with Construction Activity (adopted by the SWRCB on April 26, 2001).)

Under this Construction General Permit, discharges of stormwater from construction sites with a disturbed area of one or more acres are required to either obtain individual NPDES permits for stormwater discharges or be covered by the Construction General Permit. Completing and filing a Notice of Intent with the SWRCB accomplishes coverage under the Construction General Permit. Each applicant under the Construction General Permit must ensure that a SWPPP is prepared prior to grading and implemented during construction. The primary objective of the SWPPP is to identify, construct, implement, and maintain BMPs to reduce or eliminate sediment and non-sediment construction-related

pollutants in stormwater discharges and authorized non-stormwater discharges from the construction site. Compliance with the requirements of the Construction General Permit is used as one method to evaluate project construction-related impacts on surface water quality.

(78) General Waste Discharge Requirements for Dischargers of Groundwater From Construction and Project Dewatering

The Los Angeles RWQCB has issued a General NPDES Permit and General Waste Discharge Requirements (WDRs) (Order No. R4-2003-0111, NPDES No. CAG994004) governing construction-related dewatering discharges within the project development areas (the “General Dewatering Permit”). This permit addresses discharges from temporary dewatering operations during construction and permanent dewatering operations associated with development. The discharge requirements include provisions mandating notification, sampling and analysis, and reporting of dewatering and testing-related discharges. The General Dewatering Permit authorizes construction-related activities so long as all conditions of the permit are fulfilled. The primary objective of the General Dewatering Permit conditions is to identify and control pollutants in construction-related dewatering discharges. Compliance with the requirements of the General Dewatering Permit is used as one method to evaluate project construction-related impacts on surface water quality.

(98) Discharge of Fill or Dredge Materials

Hydrologic conditions of concern addressed in this report include instream changes in sediment transport, erosion, sedimentation and ultimately channel stability. There is a nexus between these concerns and the stream, habitat, and species protection programs administered by ACOE, CDFG, and USFWS.

Section 404 of the CWA is a program that regulates the discharge of dredged and fill material into “waters of the United States,” including wetlands. Activities in waters of the United States that are regulated under this program include fills for development (including physical alterations to drainages to accommodate storm drainage, stabilization, and flood control improvements), water resource projects (such as dams and levees), infrastructure development (such as highways and airports), and conversion of wetlands to uplands for farming and forestry. The US EPA and the ACOE have issued Section 404(b)(1) Guidelines (40 C.F.R. Section 230) that regulate dredge and fill activities, including water quality aspects of such activities. Subpart C, at sections 230.20 through 230.25, contains water quality regulations applicable to dredge and fill activities. Among other topics, these guidelines address discharges that alter substrate elevation or contours, suspended particulates, water clarity, nutrients and chemical content, current patterns and water circulation, water fluctuations (including those that alter erosion or sediment rates) and salinity gradients.

Section 401 of the CWA requires that any person applying for a federal permit or license that may result in a discharge of pollutants into waters of the United States obtain a state water quality certification that the activity complies with all applicable water quality standards, limitations, and restrictions. No license or permit may be issued by a federal agency until certification required by Section 401 has been granted. Further, no license or permit may be issued if certification has been denied. CWA Section 404 permits and authorizations are subject to Section 401 certification by the RWQCBs.

The CDFG is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the law requires the proponent of a project that may impact a river, stream, or lake to notify the CDFG before beginning the project. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life, and watercourses having a surface or subsurface flow that support or have supported riparian vegetation.

Section 1602 of the California Fish and Game Code requires any person who proposes a project that will substantially divert or obstruct the natural flow, or substantially change the bed, channel, or bank of any river, stream, or lake or use materials from a streambed, notify the CDFG before beginning the project. Similarly, under section 1602, before any state or local governmental agency or public utility begins a

construction project that will (1) divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake; (2) use materials from a streambed; or (3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake, it must first notify the CDFG of the proposed project. If the CDFG determines that the project may adversely affect existing fish and wildlife resources, a Lake or Streambed Alteration Agreement is required. (The impacts associated with physical alterations to jurisdictional areas are evaluated in **Section 4.4, Biota**, of this Recirculated EIR.) The direct and indirect effects on water quality associated with the proposed project, including physical alterations to jurisdictional areas, are evaluated below. In addition, potential changes in flow characteristics that affect beneficial uses and water quality due to increased erosion, deposition, or changes in channel stability are considered in this section.

b. Physical Setting

(1) Receiving Water Bodies and Beneficial Uses

(a) Santa Clara River

The Landmark Village project consists of an approximately 292-gross-acre tract map site, as well as off-site improvements necessary to support the development. Off-site improvements include the Adobe Canyon borrow site; the Chiquito Canyon grading site; a water tank site; the Long Canyon Road Bridge; bank stabilization; drainage improvements; improvements to State Route 126 (SR-126), including widening and land improvements from just west of Commerce Center Drive to the western edge of the tract map site; a utility corridor; and haul routes. As shown in **Figure 4.3-1**, the tract map site is located immediately west of the confluence of Castaic Creek and the Santa Clara River. The banks of the Santa Clara River form the southern tract map boundary while the northern boundary is defined by SR-126. The western boundary is defined by Chiquito Canyon Creek. The tract map site itself consists of land under agricultural cultivation.

The Adobe Canyon borrow site is located south of the Santa Clara River and adjacent to Long Canyon. The Chiquito Canyon grading site is located in the low-lying hills north of SR-126, easterly of Chiquito Canyon Road. The utility corridor runs parallel to SR-126, from the western boundary of the tract map site to the approved Newhall Ranch WRP near the Los Angeles County/Ventura County line, from the eastern boundary of the tract map site to Interstate 5 (I-5), and then south to Round Mountain. The Long Canyon Road Bridge is on the west side of the tract map site, and it would span approximately ~~1,000~~1,050 feet over the Santa Clara River, with a width of about 100 feet. Support for the bridge would involve construction of 11 piers within the River corridor. Each pier would be spaced about 100 feet apart. Abutments and bank stabilization would be required on both sides of the bridge to protect against erosive

of the watershed of approximately 0.11. The topography for the watershed varies from a maximum elevation of 2,600 feet in the headwaters to a low elevation of 930 feet near the mouth of the canyon at the Santa Clara River Valley. Both sides of this watershed contain habitat types comprised primarily of coastal sage scrub, with small pockets of chamise chaparral, and grassland present. (See URS, 2003. Jurisdiction Delineation Package. Prepared for Newhall Land by URS Corporation, December 2003.) Within the stream channel, there is a mixture of grassland, elderberry scrub, live oak woodland, alluvial scrub, great basin scrub, mixed chaparral, and alluvial scrub.

The 8.7 square mile (5,555.3 acre) Castaic Creek watershed is a tributary located north of the Santa Clara River. The total length of the mainstem channel is approximately 36,819 feet, with an average overall slope of 3.7 percent. The maximum elevation difference from the headwaters to the mouth of the creek at the Santa Clara River is 1,378 feet. Generally, the soils in the watershed are characterized as Saugus loam and predominately are classified as being in hydrologic soil group B (lower runoff potential). The associated vegetative cover within the watershed varies, but primarily consists of California coastal sage scrub.

The Adobe Canyon borrow site is located south of the Landmark Village tract map site and east of Long Canyon, on the south side of the River. Adobe Canyon is characterized by sloping hillsides and adjacent agricultural use. The borrow site is dominated by coastal sage scrub, but also includes areas of coastal sage chaparral scrub, non-native grassland, and live oak woodland. Elevations on the borrow site range from approximately 920 feet (near the River), rising to 1,260 feet above mean sea level further south.

(2) Water Quality Leaving Tract Map Site

The tract map site is presently under agricultural cultivation, and runoff is channeled *via* agricultural ditches to the Santa Clara River. The following tables provide modeling estimates for pollutants of concern presently contained in existing average annual stormwater runoff leaving the tract map site, which is estimated at 183 acre-feet.

Table 4.3-5, Existing Modeled Pollutant Loads and Concentrations, shows predicted concentrations and loads of contaminants for which sufficient flow composite sampling data exists in the Los Angeles County database to conduct modeling predictions under existing conditions. As can be seen, the average annual TSS concentration is predicted to be ~~459~~192 mg/L, while the average annual TSS load is predicted to be ~~228~~74,000 pounds (~~414~~37 tons) per year. The average annual total phosphorus concentration is predicted to be ~~1.5~~1.4 mg/L, while the average annual load is predicted to be ~~759~~548 pounds per year. The average annual nitrate-nitrogen plus nitrite nitrogen concentration is predicted to be ~~6.3~~3.0 mg/L, while the average annual load is predicted to be ~~3,107~~1,219 pounds per year. This table also indicates that the average annual ammonia concentrations are estimated at ~~1.0~~0.6 mg/L, while the average annual load

is estimated to be ~~473-215~~ pounds. Total nitrogen concentrations are estimated at ~~10-6~~ mg/L, while the average annual load is estimated at ~~5,1502,137~~ pounds. Finally, the average annual chloride concentrations are estimated at ~~24-20~~ mg/L, while the average annual load is estimated at ~~12,0007,400~~ pounds (~~3.7 tons~~).

**Table 4.3-5
Existing Modeled Pollutant Loads and Concentrations**

Constituent	Average Annual Concentration (mg/L)	Average Annual Load (lbs/year)
Total Suspended Solids	459 <u>190</u>	22874,000 <u>840</u>
Total Phosphorus	1.5 <u>1.4</u>	759 <u>548</u>
Nitrate-nitrogen plus Nitrite-nitrogen	6.3 <u>3.0</u>	3,107 <u>1,219</u>
Ammonia	1.0 <u>0.6</u>	473 <u>215</u>
Total Nitrogen	10 <u>6</u>	5,150 <u>2,137</u>
Chloride	24 <u>20</u>	12,000 <u>7,440</u>

Source: Geosyntec, 2008.

Site runoff also is predicted to contain metals in the existing condition, such as aluminum, copper, lead, and zinc. Existing modeled concentrations and loads for these metals in site runoff are contained in **Table 4.3-6, Existing Modeled Metals**. As shown, modeled average annual concentrations of dissolved copper are estimated at ~~26-28~~ micrograms per liter (µg/L), total lead is estimated at ~~16-12~~ µg/L, dissolved zinc is estimated at ~~132-185~~ µg/L, and total aluminum is estimated at ~~631-1,282~~ µg/L. Average annual loadings of dissolved copper and total lead are also similar at ~~13-10~~ and ~~8-4.5~~ pounds per year, respectively, while dissolved zinc and total aluminum loadings are much higher at an estimated ~~66-63~~ pounds per year and ~~313-487~~ pounds per year, respectively.

**Table 4.3-6
Existing Modeled Metals**

Constituent	Average Annual Concentration (µg/l)	Average Annual Load (lbs/year)
Copper*	26 <u>28.1</u>	13 <u>9.8</u>
Lead	16 <u>12.2</u>	8 <u>4.5</u>
Zinc*	132 <u>185</u>	66 <u>63</u>
Aluminum	631 <u>1,282</u>	313 <u>487</u>

Source: Geosyntec, 2008.

* Dissolved Form

(3) Receiving Water Quality

In the *Landmark Village Water Quality Technical Report* (Recirculated ~~Draft~~ Final EIR **Appendix 4.3**), the existing wet and dry weather surface water quality in the project area was characterized from available water quality monitoring data obtained from the following four (4) sources:

1. **Newhall Ranch Tributary Stormwater Monitoring.** Newhall Land conducted stormwater monitoring of tributary streams in the Specific Plan subregion to characterize the existing surface water quality during wet weather conditions. Stormwater samples were collected during (2) two storm events in March 2001. The first storm was a small event (0.2 inch of rainfall) that was likely just large enough to result in runoff. The depth of the second event was larger and was equal to the median depth (0.7 inch) at the nearby National Climatic Data Center (NCDC) Newhall Rain Gauge.

The stormwater samples were collected at five (5) monitoring locations shown on **Figure 4.3-1**. Three of the five stations were located at the mouths of tributaries to the Santa Clara River in Potrero (Station A), San Martinez (Station B), and Middle Canyons (Station D). The other two monitoring stations were located on tributaries upstream from the main stem of the River; one was just downstream of Val Verde in Chiquito Canyon (Station E) and one was on an unnamed tributary in Long Canyon, 0.25 mile upstream of the "Onion Field" (Station C). Aside from Station E, which is downgradient of existing residential uses, the land uses in the areas adjacent to Stations A, B, C, and D are predominantly open space, with some agricultural, natural gas, and oil extraction operations.

2. **Newhall WRP.** The Newhall Ranch WRP is required to conduct pre-startup water quality monitoring at upstream and downstream locations from the outfall of the proposed Newhall WRP. Wet and dry weather monitoring data were collected during six storm events at two stations in the Santa Clara River from the spring of 2004 through the spring of 2006: one station is near the downstream boundary of the Specific Plan area and close to the proposed WRP outfall location, and the second is about 2.5 miles further downstream.
3. **Los Angeles County Monitoring.** The County of Los Angeles conducts in-stream water quality monitoring on the mainstem of the Santa Clara River at a mass emission station located at The Old Road, which is at the upstream boundary of the Specific Plan area. Wet weather monitoring data are available from November 2002 through February 2007. The Los Angeles County monitoring data are the most current, and are the only source of wet weather monitoring in the Santa Clara River immediately upstream of the Specific Plan area.
4. **USGS Monitoring.** The US Geological Survey (USGS) has collected stream flow and water quality data in the Santa Clara River near the county line (USGS station 11108500) from 1951 through 1995. These data provide a historical perspective of wet and dry weather water quality in the River immediately downstream from the Specific Plan area.

Wet Weather Monitoring Data Summary. Table 4.3-7, Average Wet Weather Monitoring Data for 2-Day Precedent Rainfall Between 0.1 and 1.0 Inch, and Table 4.3-8, Average Wet Weather Monitoring Data for 2-Day Precedent Rainfall of >1 Inch, summarize the average values from wet weather monitoring data for all monitoring locations within the Newhall Ranch Specific Plan area. To facilitate interpretation, the wet weather water quality data were grouped into two categories depending on the depth of 2-day antecedent rainfall measured at the rain gauge:

1. 0.1–1 inch. Rainfall depths that would likely produce runoff volumes characteristic of more frequent, smaller storm events.
2. >1 inch. Rainfall depths that would likely produce runoff volumes characteristic of larger, less frequent storm events.

**Table 4.3-7
Average Wet Weather Monitoring Data for 2-Day Precedent Rainfall Between 0.1 and 1.0 Inch**

Constituent	LACDPW Mass Emission Station	Newhall Ranch Specific Plan Area Tributary Monitoring					Newhall Ranch WRP Startup Monitoring		USGS Wet Weather Monitoring
	529	Site A	Site B	Site C	Site D	Site E	NR1	NR3	USGS
TSS (mg/L)	845729	835	41,100	36,000	5,650	6,645	58	112	2,291
TDS (mg/L)	41958	7,380	2,825	190	160	205	855	1,076	1,437 ¹
Hardness (mg/L)	22349	2,225	1,205	147	59	107	387	475	773
Chloride (mg/L)	608	870	125	3	3	11	100	105	122
Total P (mg/L)	0.620	-	-	-	-	-	0.4	0.4	1.3
Nitrate-N (mg/L)	1.812	18 ²	3.0 ²	1.6 ²	15.3 ²	2.8 ²	3.2	3.0	2.1 ²
Nitrite-N (mg/L)	0.127	-	-	-	-	-	<0.005	<0.005	-
Ammonia-N (mg/L)	0.174	-	-	-	-	-	0.2	0.1	0.16
TKN (mg/L)	2.65	-	-	-	-	-	0.3	0.4	0.64
Dissolved Copper (µg/L)	6.458	-	-	-	-	-	4.6	3.6	-
Total Copper (µg/L)	3026	15	175	170	10	70	4.9	5.9	30
Dissolved Lead (µg/L)	46.4	-	-	-	-	-	<0.07	<0.07	7.8
Total Lead (µg/L)	5.986	6.1	54	95	7.6	37	1	0.8	-
Dissolved Zinc (µg/L)	142	-	-	-	-	-	12	8.7	10
Total Zinc (µg/L)	5471	40	330	330	30	225	18	15	150
Dissolved Aluminum (µg/L)	894264	-	-	-	-	-	27	19	-

Constituent	LACDPW Mass Emission Station	Newhall Ranch Specific Plan Area Tributary Monitoring					Newhall Ranch WRP Startup Monitoring		USGS Wet Weather Monitoring
	S29	Site A	Site B	Site C	Site D	Site E	NR1	NR3	USGS
Total Aluminum (µg/L)	5,040 <u>770</u>	-	-	-	-	-	740	770	-
Diazinon (µg/L)	0.05	-	-	-	-	-	<0.01	<0.01	0.02
Chlorpyrifos (µg/L)	<0.05	-	-	-	-	-	<0.6	<0.6	-
Cyanide (mg/L)	<0.01	-	-	-	-	-	-	-	-
Fecal Coliform (MPN/100mL)	<u>7,332</u> <u>101</u> <u>000</u>	<u>3,4300</u>	<u>5909</u> <u>53</u>	<u>4,632</u> <u>00</u>	<u>>81</u> <u>19,6</u> <u>200</u>	<u>81200</u> <u>19</u> <u>,600</u>	87	258	<u>4273</u> <u>00</u> ³
Total Coliform (MPN/100mL)	<u>1157</u> <u>5900</u> <u>00</u>	<u>40000</u> <u>38,700</u>	>1.6E5	<u>1250</u> <u>,000</u>	<u>>50000</u> <u>8</u> <u>9,400</u>	<u>>81200</u> <u>1</u> <u>9,600</u>	284	549	-

Source: Geosyntec, ~~2008~~2011.

¹ Derived from Specific Conductance, ² Nitrate + Nitrite-N, ³ CFU/100ml, - = no or insufficient data 4 Bacteria averages are represented as Geometric Means

The wet weather monitoring data indicate the following existing water quality conditions:

Total Suspended Solids (TSS). The total solids in a liquid sample consist of total dissolved solids and total suspended solids. Total dissolved solids (TDS, discussed below) are materials in the water, primarily inorganic salts (calcium, magnesium, potassium, sodium, chlorides, and sulfates), that will pass through a filter with a 2.0 micrometer or smaller nominal average pore size; the material retained by the filter is the total suspended solids (TSS). (Sawyer et al., 1994. Chemistry for Environmental Engineering, Fourth Edition. Claire Sawyer, Perry McCarty, and Gene Parkin. McGraw-Hill, Inc., 1994.) It is generally expected that TSS concentrations in alluvial streams can be greatly elevated during storm runoff because of the combination of high sediment supply and a high capacity for in-stream transport and erosion. Average TSS concentrations in the Santa Clara River were sometimes very high due to the highly erodible, easily transportable, sandy alluvial soils and sediments, and average concentrations were much higher for the larger storms than the smaller storms. These results show the capacity of high flows in the Santa Clara River for sediment transport and are consistent with other data showing that large rainfall events result in a "reset" of the main channel. As concluded by Balance Hydrologics (2005), concepts of "normal" or "average" sediment-supply and flow conditions have limited value in this "flashy" environment, where episodic storm and wildfire events have enormous influence on sediment and storm flow conditions. In the Santa Clara River, a large portion of sediment movement events can occur in a matter of hours or days.

Table 4.3-8
Average Wet Weather Monitoring Data for 2-Day Precedent Rainfall of >1 Inch

Constituent	LACDPW SCR Mass Emission Station	Newhall Ranch WRP Startup Monitoring	USGS Wet Weather Monitoring
	S29	NR3	11108500
TSS (mg/L)	1,635 <u>1,482</u>	43,360	10,711
TDS (mg/L)	216 <u>101</u>	2,100	838 ¹
Hardness (mg/L)	108 <u>197</u>	832	546
Chloride (mg/L)	224	46 <u>--</u>	61
Total P (mg/L)	0.42 <u>54</u>	13	1.0
Nitrate-N (mg/L)	0.80 <u>74</u>	1.4	1.7 ²
Nitrite-N (mg/L)	0.13 <u>8</u>	ND	
Ammonia-N (mg/L)	0.23 <u>9</u>	0.5	-
TKN (mg/L)	5.64 <u>3</u>	46	0.69
Dissolved Copper (µg/L)	9.98 <u>4</u>	-	-
Total Copper (µg/L)	2631	-	-
Dissolved Lead (µg/L)	3.32 <u>4</u>	-	-
Total Lead (µg/L)	1730	-	-
Dissolved Zinc (µg/L)	2426	-	-
Total Zinc (µg/L)	110126	-	-
Dissolved Aluminum (µg/L)	1,086 <u>420</u>	-	-
Total Aluminum (µg/L)	5,672 <u>161</u>	-	-
Diazinon (µg/L)	0.10	<0.01	-
Chlorpyrifos (µg/L)	<0.05	<0.6	-
Cyanide (µg/L)	200	-	-
Fecal Coliform (MPN/100 mL)	65,275 <u>2,700</u>	>1,600	2,700 ³
Total Coliform (MPN/100 mL)	246,812 <u>--</u>	>1,600	-

Source: Geosyntec, ~~2008~~2011.

¹ Derived from Specific Conductance, ² Nitrate + Nitrite-N, ³ CFU/100ml, - = no or insufficient data

Total Dissolved Solids (TDS). Stormwater monitoring data collected in the tributaries showed greatly differing TDS levels among the five monitoring stations. Measured TDS concentrations were very high at Sites A (Potrero Canyon) and B (San Martinez Grande Canyon), while TDS concentrations at the other three sites were low. Elevated TDS levels in runoff at Sites A and B are likely a result of the natural soil properties of the marine layers of the Pico formation and the high groundwater table conditions in these two canyons, suggesting that groundwater discharges to the channels contributed to the elevated TDS levels. These greatly differing dissolved solid (TDS) concentrations also are reflected in some of the components that make up the TDS (chloride and hardness), as described below.

emission station were very high, ranging from 87 Most Probable Number per 100 milliliters (MPN/100 mL) to 323,000 MPN/100 mL. Average bacteria concentrations at the lower stations were significantly lower, but still elevated, and more so during larger storms. In waters designated for water contact recreation (REC-1), the Basin Plan objective for fecal coliform is a log mean of 200/100 mL (based on a minimum of not less than 10 percent of total samples during any 30-day period), nor shall more than 10 percent of the total number of samples during any 30-day period exceed 400/100 mL.

Dry Weather Monitoring Data Summary. Dry season base flows in the Santa Clara River through the proposed project area are perennial. Dry season base flows may include contributions from natural groundwater flows; however, discharges from the upstream Saugus and Valencia WRPs contribute the majority of base flow. Discharges from the WRPs during dry weather conditions are a source of impairing pollutants in downstream reaches, including chloride, TDS, and nitrogen compounds. Dry weather water quality monitoring data in the Santa Clara River are available from LACDPW sampling at the Santa Clara River mass emission station, Newhall Ranch WRP pre-startup monitoring, and USGS water quality monitoring. **Table 4.3-9** summarizes the average values from dry weather monitoring data for these monitoring locations.

**Table 4.3-9
Average ~~Wet~~ Dry Weather Monitoring Data for 2-Day Precedent Rainfall of > 1 Inch**

Constituent	SCR Mass Emission Station	USGS Dry Weather Monitoring	Newhall Ranch WRP Startup Monitoring	
	S29	11108500	NR1	NR3
TSS (mg/L)	200 <u>135</u>	349	66	128
Hardness (mg/L)	420 <u>411</u>	881	388	458
TDS (mg/L)	812 <u>806</u>	1541 ¹	845	936
Chloride (mg/L)	114 <u>5</u>	140	120	124
Total P (mg/L)	0.26 <u>18</u>	1.13	0.5	0.5
Nitrate-N (mg/L)	1.2	4 ²	2.8	2.9
Nitrite-N (mg/L)	0.4 <u>23</u>	-	0.02	0.02
Ammonia-N (mg/L)	0.08 <u>4</u>	0.18	0.1	0.1
TKN (mg/L)	0.08 <u>6</u>	0.83	0.4	0.5
Dissolved Copper (µg/L)	2.4 <u>9</u>	1.8	4	4.2
Total Copper (µg/L)	15.2 <u>13</u>	20	5	6.5
Dissolved Lead (µg/L)	<5.00 <u>17</u>	7.8	0.2	0.2
Total Lead (µg/L)	1.3 <u>8</u>	ND	0.9	1.4
Dissolved Zinc (µg/L)	6.4 <u>7.9</u>	15.8	11	10.7

Constituent	SCR Mass Emission Station	USGS Dry Weather Monitoring	Newhall Ranch WRP Startup Monitoring	
	S29	11108500	NR1	NR3
Total Zinc (µg/L)	20.71	45	15.4	19.5
Dissolved Aluminum (µg/L)	36	-	170	289
Total Aluminum (µg/L)	845566	-	1018	1685
Diazinon (µg/L)	0.01	0.03	<0.01	<0.01
Chlorpyrifos (µg/L)	<0.05	-	-	-
Cyanide (mg/L)	<0.01	-	-	-
Fecal Coliform (MPN/100 mL)	165	250 ¹	209	213
Total Coliform (MPN/100 mL)	3,626	-	961	1207

Source: Geosyntec, 2008-2011.

¹ CFU/100 mL, - = no or insufficient data

The dry weather monitoring data indicate the following:

TSS. Relatively high average TSS concentrations were observed, particularly in the historical data from USGS station, which may have included samples taken during times of higher erosion or larger dry weather flows. Average dry weather flow TSS concentrations observed by the Newhall Ranch WRP pre-startup monitoring were similar to those observed for small storms in wet weather monitoring. Average concentrations of TSS appeared higher at the upstream LACDPW mass emission station than at the downstream Newhall Ranch WRP pre-startup sites. Differences may be due to physical factors such as channel substrate material, local flow regime, and tributary influences.

Hardness, TDS and Chloride. The average concentrations of hardness, TDS, and chloride were more similar between the LACDPW mass emission station and Newhall Ranch WRP monitoring locations. However, the USGS county line station historically recorded higher averages (approximately double) than the baseline data observed at the LACDPW mass emission station and Newhall Ranch WRP monitoring locations. The baseline data suggests that the water flowing in the Santa Clara River in the proposed project area during dry weather is very hard with high levels of other dissolved salts, including chloride. The average concentrations of TDS in the baseline data ranged from 812 mg/L to 936 mg/L, below the Basin Plan objective for TDS in Santa Clara River Reach 5 (1,000 mg/L). Average chloride concentrations in dry weather flows ranged from 115 mg/L to 124 mg/L, which are above the Basin Plan objective of 100 mg/L.

Nitrate+nitrite-N was chosen as the pollutant of concern for purposes of evaluating groundwater quality impacts based upon the above considerations. High nitrate levels in drinking water can cause health problems in humans. Infants can develop methemoglobinemia (blue-baby syndrome). Human activities and land use practices can influence nitrogen concentrations in groundwaters. For example, irrigation water containing fertilizers can increase levels of nitrogen in groundwater.

(2) Other Groundwater Constituents

Other constituents typically associated with groundwater include the following:

Bacteria. The Basin Plan contains numeric criteria for bacteria in drinking water sources. As bacteria are removed through straining in soils (for example, as with septic tank discharges), incidental infiltration of runoff in the project ~~treatment-LID~~ PDFs is not expected to affect bacteria levels in groundwater. The WRP will include a disinfection process to reduce bacteria below levels of concern; therefore, bacteria in irrigation water are not expected to impact groundwater.

Chemical Constituents and Radioactivity. Drinking water limits for inorganic and organic chemicals that can be toxic to human health in excessive amounts and radionuclides are contained in Title 22 of the California Code of Regulations. These chemicals and radionuclides are not expected to occur in this project's runoff because this project does not include industrial uses. Title 22 specifies California's Wastewater Reclamation Criteria (WRC) and the Newhall Ranch WRP's reclaimed water must meet or exceed these criteria. These criteria apply to the treatment processes; treatment performance standards, such as removal efficiencies and effluent water quality; process monitoring programs, including type and frequency of monitoring; facility operation plans; and necessary reliability features. Due to compliance with these criteria, chemical constituents and radionuclides are not expected to occur in irrigation water in amounts that would impact groundwater.

Taste and Odor. The Basin Plan contains a narrative objective for taste and odor that cause a nuisance or adversely affect beneficial uses. Undesirable tastes and odors in groundwater may be a nuisance and may indicate the presence of a pollutant(s). Odor associated with water can result from natural processes, such as the decomposition of organic matter or the reduction of inorganic compounds, such as sulfate. Pollutants causing taste and odor issues are not expected to occur in stormwater or irrigation water in amounts that would impact groundwater. Other potential sources of odor causing substances, such as industrial processes, would not occur as part of this project. Therefore, taste and odor-producing substances are not pollutants of concern for the project.

Mineral Quality: TDS, Sulfate, Chloride, and Boron. Mineral quality in groundwaters is largely influenced by the mineral assemblage of soils and rocks that it comes into contact with. Elevated mineral concentrations could impact beneficial uses; however, the minerals listed in the Basin Plan are not believed to be pollutants of concern due to the anticipated runoff concentrations and the expected

where only wet weather flows existed prior to development. These changes are referred to as “hydromodification.”²⁴

Hydromodification intensifies sediment transport and often leads to stream channel enlargement and loss of habitat and associated riparian species. (SCCWRP, 2005; Geosyntec, 2002; Bledsoe & Watson, 2001; MacRae, 1992; Booth, 1990). Under certain circumstances, development can also cause a reduction in the amount of sediment supplied to the stream system, which can lead to stream channel incision and widening. These changes also have the potential to impact downstream channels and habitat integrity. A project that increases runoff due to impervious surfaces and traps sediment from upland watershed sources creates potential compounding effects.

A change to the project site’s hydrologic regime would be considered a condition of concern if the change could have a significant impact on downstream natural channels and habitat integrity, alone or in conjunction with impacts of other projects.

6. POST DEVELOPMENT PROJECT DESIGN FEATURES

PDFs incorporated into the Landmark Village tract map project and off-site improvements to address surface water quality and hydromodification impacts include ~~low impact/site design~~, source control, LID, treatment control, and hydromodification control BMPs. Effective management of wet and dry weather runoff water quality begins with limiting increases in runoff pollutants and flows at the source. ~~Low impact/s~~Site design, LID, and source control BMPs are practices designed to minimize runoff and the introduction of pollutants into runoff. Treatment control BMPs are designed to remove pollutants once they have been mobilized by rainfall and runoff. Hydromodification control BMPs are designed to control increases in post-development runoff flows, volumes, and/or durations.

a. ~~Low Impact/Site Design~~ and LID BMPs

The purpose of ~~low impact/site design~~ and LID BMPs, to the extent feasible, is to mimic the pre-developed hydrologic regime. ~~This low impact/site design philosophy is often referred to as Low Impact Development (LID).~~ (See County of Los Angeles Low Impact Development Standards Manual, January 2009.) The primary goals of ~~low impact/site design~~ and LID BMPs are to maintain a landscape functionally equivalent to pre-development hydrologic conditions and to minimize the generation of pollutants of concern.

²⁴ Hydromodification also can refer to physical alterations to drainage beds and banks. The impacts and affects resulting from these types of physical alterations, rather than the effects associated with changes in flows, are addressed in **Section 4.5**, Floodplain Modification.

Low impact/sSite design and LID principles include:

Minimize Impervious Area/Maximize Permeability. Principles include preserving natural open space; reducing impervious surfaces (such as roads); using more permeable paving materials; reducing street widths; using minimal disturbance techniques during development to avoid soil compaction; reducing the land coverage of buildings by building taller and narrower footprints; minimizing the use of impervious materials, such as decorative concrete in landscape design; and incorporating detention or infiltration into landscape design.

Minimize Directly Connected Impervious Areas (DCIAs). Minimizing DCIA can be achieved by directing runoff from impervious areas to vegetated areas (e.g., landscaped areas or vegetated treatment control BMPs) or to infiltration LID BMPs.

Conserve Natural Areas. Conserving and protecting native soils, vegetation, and stream corridors helps to mimic the site's natural hydrologic regime. This may be accomplished by clustering development within portions of the site to conserve as much natural open space as possible, limiting the extent of clearing and grading of native vegetation, planting additional vegetation, using native and/or non-native/non-invasive vegetation in parking lot islands and other landscape areas, and preserving and/or restoring riparian areas and wetlands.

Select Appropriate Building Materials. Use of appropriate building materials reduces the generation and discharge of pollutants of concern in runoff (and is, therefore, also a source control BMP).

Protect Slopes and Channels. Protecting slopes and channels reduces the potential for erosion and preserves natural sediment supply.

(1) Newhall Ranch LID BMP Performance Standard

A LID BMP Performance Standard conceptually similar to the LID requirements in the Ventura County NPDES MS4 Permit has been developed for the Landmark Village project. The LID BMP Performance Standard is illustrated in Figure 4.3-2, Landmark Village LID BMP Performance Standard, and is described below:

LID project design features (PDFs) shall be selected and sized to: (1) fully retain the volume of stormwater runoff produced from a 0.75 inch storm event; and (2) reduce the percentage of Effective Impervious Area (EIA) to five percent or less of the total project area within the vesting tentative map and associated off-site project area. Runoff from all EIA shall be subject to treatment control measures that are selected to address the pollutants of concern and are sized to capture and treat 80 percent of the average annual runoff volume.

This LID Performance Standard would be implemented on the Project as follows:

1. Institutional, commercial, multi-family residential, recreation, and park land use parcels would implement retention or biofiltration BMPs on-site to the extent feasible. Based on an assessment of feasibility, one of three BMP strategies would be applied as outlined below:
 - a. Infiltration feasible: If it is feasible to infiltrate all of the developed area runoff produced from the 0.75 inch design storm (i.e., soil infiltration rates are at least 0.5 inches per hour, fill depth is less than 10 feet, and no infiltration geotechnical hazards exist (such as landslides and terrace escarpments)), infiltration BMPs would be used. Infiltration BMPs include bioretention (without an underdrain), permeable pavement, infiltration galleries, infiltration basins or trenches, or an equivalent infiltration BMP.
 - b. Bioinfiltration allowable when low infiltration rates or deep fill depths are present: If the parcel has low soil infiltration rates (i.e., the soil infiltration rate is less than 0.5 inches per hour) or the depth of fill is greater than 10 feet, but no other technical infeasibility concerns exist, bioinfiltration BMPs would be used. Bioinfiltration facilities are similar to bioretention facilities with an underdrain, but they include storage below the underdrain to maximize the volume infiltrated. These facilities would retain a portion of the runoff from the LID design storm, then biofilter the remaining runoff from the design storm.
 - c. Infiltration is not allowable: If infiltration is technically infeasible due to geotechnical hazards or a high ground water table, then biofiltration BMPs would be used. These BMPs would biofilter the runoff produced from the LID design storm from the developed area.
2. Runoff from roofs, patios, and walkways in single family residential parcels would be disconnected over landscaped areas designed to fully retain the volume of runoff from the LID design storm (0.75 inch storm event). Runoff from the remaining parcel area and that which does not infiltrate in the landscaped area would flow through the storm drain system to the regional infiltration/biofiltration facilities.
3. Runoff from roadways would be retained or biofiltered in retention or biofiltration BMPs sized to capture the LID design storm volume or flow, per the guidance in US EPA's *Managing Wet Weather with Green Infrastructure: Green Streets*.
4. No more than 5% of the total Project area would be treated using conventional treatment methods that address the pollutants of concern. In this case, media filters (or equivalent BMPs that address the pollutants of concern) would be sized to capture and treat 80% of the average annual runoff volume from the allowable EIA.
5. Regional infiltration/biofiltration facilities would also be implemented. The regional facilities would be designed to incorporate a biofilter in the bottom of the facility, which would allow for infiltration if feasible, with detention storage above the biofilter. The regional facilities would infiltrate or biofilter the LID design storm volume that has not been retained or biofiltered on the parcels in the area tributary to the regional facility and would provide extended detention treatment for the additional runoff volume required to provide 80% capture and treatment of the average annual runoff volume per the Newhall Ranch Specific Plan Sub-Regional Stormwater Mitigation Plan treatment performance standard.

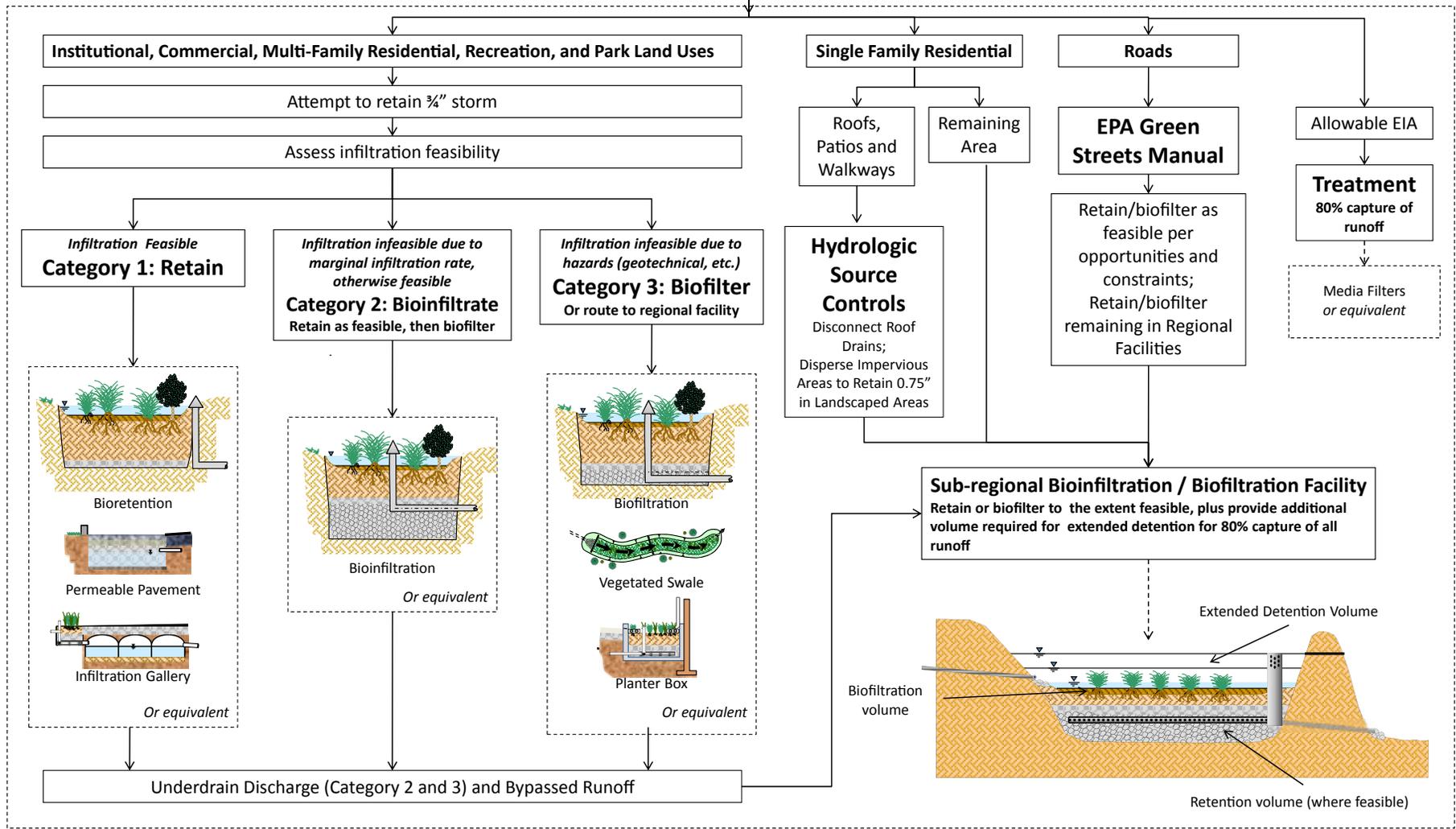
Site design and LID BMP implementation for the project occurs at different spatial scales of development. These spatial scales are listed below, from larger to smaller scale:

- Ranch scale – the Newhall Ranch Specific Plan subregion;
- Village scale – the Landmark Village project;
- Land use scale – single family residential, multi-family residential, commercial, education, parks, and roadways within the Landmark Village project, and
- Lot or parcel scale – individual lots or parcels within the Landmark Village project.

Table 4.3-14, Landmark Village ~~Low Impact~~/Site Design and LID BMPs, lists the ~~low impact~~/site design and LID BMPs that would be implemented by the project at each spatial scale.

LANDMARK VILLAGE LID PERFORMANCE STANDARD

LID project design features (PDFs) shall be selected and sized to retain the volume of stormwater runoff produced from a 0.75 inch storm event to reduce the percentage of Effective Impervious Area (EIA) to 5 percent or less of the total project area within the vesting tentative map project and associated off-site project area. Runoff from all EIA shall be treated with treatment control measures that are selected to address the pollutants of concern and are sized to capture and treat 80 percent of the average annual runoff volume.



SOURCE: Geosyntec Consultants – September 2011

FIGURE 4.3-2

Landmark Village LID Performance Standard

Table 4.3-14
Landmark Village ~~Low Impact~~/Site Design and LID BMPs

Spatial Scale	Corresponding Low Impact /Site Design <u>or LID</u> BMP
Ranch Scale	The Newhall Ranch Specific Plan clusters development into villages. Approximately 70 <u>74</u> % (8,335 <u>10,145</u> acres) of the Specific Plan subregion will remain undeveloped Open Areas.
	A system of Open Areas will weave through the Specific Plan area. The Open Areas include community parks, prominent ridges, bluffs, slopes, creek beds, and utility and trail system easements, and would often function as a transition between development areas and the Special Management Areas (SMAs), which include the Santa Clara River Corridor and the Newhall Ranch High Country. The Open Areas are designed to protect significant landforms and natural resources.
	The Newhall Ranch Specific Plan Land Use Plan designates a total of approximately 5,200 acres for the SMAs. These SMAs are designed to protect the existing natural resources within Los Angeles County's Significant Ecological Areas (SEA) 20 and 23.
	The nearly 1,000-acre Santa Clara River Corridor SMA is designed to protect the sensitive biological resources in SEA 23. The River Corridor SMA will be dedicated to the Center for Natural Lands Management, and the Center will assume responsibility for management of this area.
	The largest land use designation of the Land Use Plan is the approximately 4,200-acre High Country SMA/SEA 20. The High Country SMA/SEA 20 is located in the southern portion of the subregion and includes oak savannahs, high ridgelines, and various canyon drainages, including Salt Creek, a regionally significant wildlife corridor that provides an important habitat link to the Santa Clara River. The High Country SMA/SEA 20 will be dedicated in fee to the Newhall Ranch Joint Powers Authority (JPA), consisting of the County of Los Angeles, the City of Santa Clarita, and the Santa Monica Mountains Conservancy; this JPA will assume responsibility for management of this area.
	As a result of approval of the Newhall Ranch Specific Plan, the 1,500-acre portion of the Salt Creek watershed situated in Ventura County, which is under the ownership of Newhall Land, will be dedicated to the JPA. This dedication area is west of Newhall Ranch, and will be managed in the same manner as the High Country SMA, discussed above.
	Two conservation easements have been granted to CDFG for the purpose of conserving populations of spineflower that occur on the Specific Plan area.

Spatial Scale	Corresponding Low Impact Site Design or LID BMP
Landmark Village Scale	<p>Impervious areas would be minimized by incorporating landscaped areas into each village, including Landmark Village. Approximately 59.6713 acres (2024%) of the 292.6 gross acre Landmark Village project tract map area would remain as trails, parks, and vegetated slopes, <u>open space</u>, and water quality treatment BMPs. Additional landscaped areas would be provided in conjunction with the residential and commercial uses, resulting in approximately 3936% of the tract map site being pervious.</p>
	<p>The Landmark Village stormwater treatment system would provide treatment control for 10097% of post-development impervious surface <i>via</i> the use of <u>parcel-based and sub-regional LID</u>vegetated treatment BMPs that provide for volume reduction through infiltration and evapotranspiration, including one or more of the following volume reduction BMPs: bioretention, vegetated swales, and a dry extended detention basin. See Figure 4.3-2, Figure 4.3-3, and Tables 5.0-44.3-15 through 5.0-764.3-17.</p>
	<p>In areas not subject to mass grading, the smallest site disturbance area possible would be delineated and flagged; temporary storage of construction equipment would be restricted in these areas to minimize soil compaction on site. Site clearing and grading would be limited to the footprint necessary to allow development, access, and provide fire protection.</p>
	<p>The Santa Clara River Corridor, Chiquita Canyon, Long Canyon and Castaic Creek would be largely preserved, and development impacts to these resources would be minimized. An average <u>Buffers</u> (the distance between the existing riparian resources and the Regional River Trail) of 10050 to 200 feet would be provided along the Santa Clara River Corridor; additionally, commercial, residential, and mixed use development would be setback 100 feet from the Regional River Trail outside of the Santa Clara River SMA/SEA 23, which would further separate development from the Santa Clara River Corridor.</p>
	<p>Natural slopes and native vegetation on slopes adjacent to the Santa Clara River would be restored and enhanced.</p>
Land Use Scale	<p>Streets, sidewalks, and parking lot aisles would be constructed to the minimum widths specified in the Specific Plan, and in compliance with regulations for the Americans with Disabilities Act and safety requirements for fire and emergency vehicle access.</p>
	<p>Portions of the Santa Clara River Regional River Trail would incorporate granular materials, or other pervious materials.</p>
	<p>Native and/or non-native/non-invasive, climate-appropriate vegetation that requires less</p>

Spatial Scale	Corresponding Low Impact Site Design or LID BMP
	<p>watering and chemical application would be utilized within the common area landscaping in commercial areas and multi-family residential areas.</p> <p>Impervious surfaces would be minimized in common area landscape design for commercial areas and multi-family residential areas.</p> <p>Landscape watering in common areas, commercial areas, multiple family residential areas, and parks would use efficient reclaimed water irrigation technologies with centralized irrigation controls. Efficient irrigation for common area irrigation systems would include a combination of the following techniques:</p> <ul style="list-style-type: none"> • Low volume irrigation systems, including low volume sprinkler heads, drip emitters, and bubbler emitters. • “Smart” irrigation controllers, to control the amount of time irrigation systems are operated each day, including satellite controlled sensors or other equally effective technology.
Lot Scale	<p><u>Parcel-based LID BMPs (e.g., bioretention areas, porous pavement, swales) would manage runoff from commercial, multi-family residential, institutional, recreational, and park land uses and infiltrate, bioinfiltration, or biofilter this runoff, as feasible based on geotechnical conditions. These BMPs would be located in parking lot islands and other on-site landscaped areas.</u>Bioretention would be placed within the road right-of-way along “A” Street.</p> <p><u>Home builders would be required to implement hydrologic source controls for rooftops, patios, and walkways to retain the LID design storm volume. Hydrologic source controls include but are not limited to directing rooftop runoff through landscaped areas, installing percolation trenches, and installing rain barrels.</u>Runoff from most sidewalks, walkways, trails, and patios would be directed into adjacent landscaping or to vegetated swales.</p>

Source: Geosyntec, 2008.

b. LID and Treatment Control BMPs

As currently planned, approximately 97 percent of stormwater runoff from developed areas within the project site would be routed to LID BMPs implemented at the parcel and regional scale (Figure 4.3-3, Project Design Features). The remaining 3 percent would be treated in media filters or equivalent treatment control BMPs that address pollutants of concern. ~~As currently planned, stormwater runoff from all urban areas within the project would be routed to bioretention areas, vegetated swales and/or~~

~~extended detention basin treatment control BMPs (Figure 4.3-2, Project Design Features). Catch basin inserts also would be used in high-use parking lots. Collectively, the water quality LID and treatment control PDFs would treat the pollutants of concern in runoff from the approximately 292.6-gross-acre Landmark Village development area. Long Canyon Bridge would drain to a water quality extended detention basin sub-regional biofiltration facility located within the tract map site. The off-site SR-126 expansion project would provide vegetated swale treatment biofiltration for both the new and existing untreated roadway area. The utility corridor maintenance access road and potential future trail, as well as the water tank and access roads, would drain to infiltration or bioinfiltration BMPs (vegetated swale, filter strip, porous pavement, or bioretention) biofiltration (vegetated swale or filter strip) or bioretention treatments. These extended detention basin, vegetated swales, and bioretention areas LID BMPs would be designed to operate off line, receiving dry weather flows, small storm flows and the initial portion of large storm flows from a low flow diversion structure in the storm drain. The proposed treatment control LID BMP PDFs are illustrated in Figure 4.3-34, Examples of Infiltration, Bioinfiltration, and Biofiltration Facilities; Figure 4.3-4, Conceptual Illustration of a Vegetated Swale; and Figure 4.3-5, Conceptual Illustration of a Water Waste Basin.~~

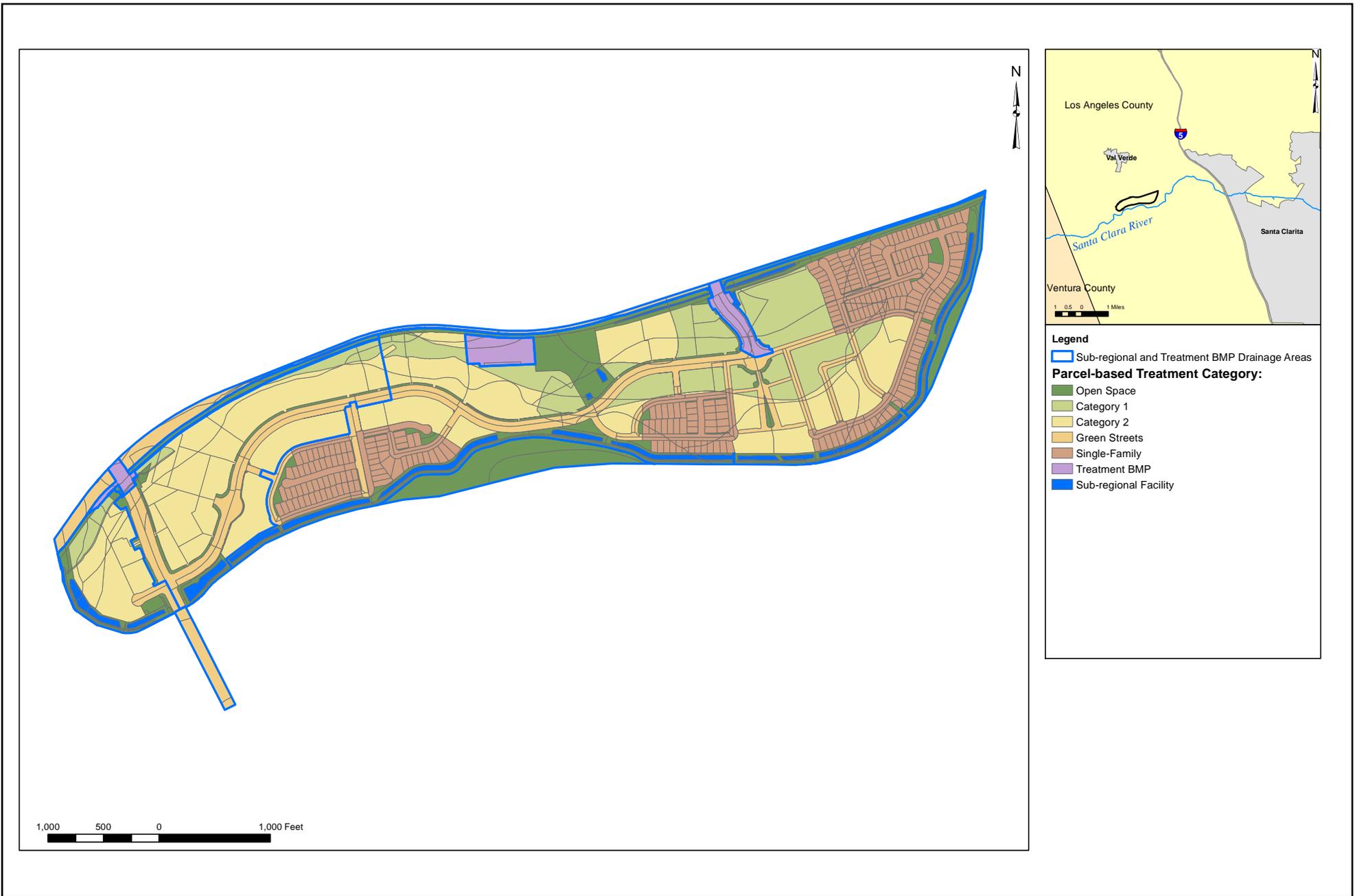
In addition to site design and source control BMPs, the ~~water quality treatment control LID BMP PDFs for the tract map site and off-site project features are described below. Treatment control LID BMP PDFs for the tract map site are summarized in Table 4.3-15, Extended Detention Basin Treatment Control LID BMPs; Table 4.3-16, Bioretention Treatment Control BMPs; and Table 4.3-17, Vegetated Swale Treatment Control BMPs.~~ Project-related improvements at the borrow sites would not result in the introduction of impervious surfaces or any changes in drainage or hydrology characteristics. Therefore, all water quality potential impacts of runoff discharges from the borrow sites are limited to the construction phase pollutants.

- Parcel-based Infiltration BMPs: Parcel-based infiltration BMPs include bioretention (without an underdrain), permeable pavement, infiltration galleries, infiltration basins or trenches, or an equivalent infiltration BMP.

- **Parcel-based Bioinfiltration BMPs:** Parcel-based bioinfiltration BMPs include bioretention (with an elevated underdrain), vegetated swales (with combined retention and treatment mechanisms), and other BMPs that are designed to retain a portion of the runoff from the LID design storm, then biofilter the remaining runoff from the design storm.
- **Parcel-based Biofiltration BMPs:** Parcel-based biofiltration BMPs provide for pollutant removal (e.g., filtration, adsorption, nutrient uptake) by filtering stormwater through the vegetation and soils. These BMPs include bioretention with underdrains, vegetated media filters, vegetated swales, and filter strips. In bioretention areas, as well as in vegetated swales and filter strips, pore spaces and organic material in the soils help to retain water in the form of soil moisture and to promote the adsorption of pollutants (e.g., dissolved metals and petroleum hydrocarbons) into the soil matrix. Plants utilize soil moisture and promote the drying of the soil through transpiration.
- **Single Family Hydrologic Source Controls (Single Family HSCs):** Runoff from roofs, patios, and walkways in single family residential parcels would be disconnected over landscaped areas designed to fully retain the volume of runoff from the LID design storm (0.75 inch storm event). Single Family HSCs would provide volume reduction by routing downspouts to landscaped areas, shallow percolation trenches, rain barrels or other equivalent means of retaining the LID design storm. Storage volume would be recovered via infiltration and evapotranspiration.
- **Media Filtration:** Media filtration is typically comprised of a vault or catch basin that houses media designed to trap particulates and remove pollutants such as dissolved metals, nutrients, and hydrocarbons. During the filtering process, the treatment system also removes surface scum and floating oil and grease. Media may be contained in cartridges or be placed directly in a media bed configuration.
- **Regional Infiltration/Biofiltration Facilities:** Regional infiltration/biofiltration facilities would be designed to incorporate a biofilter in the bottom of a regional basin, which would allow for infiltration if feasible, with detention storage above the biofilter. The regional facilities would infiltrate or biofilter the LID design storm volume that has not been retained or biofiltered on the parcels in the area tributary to the regional facility and would provide extended detention treatment for the additional runoff volume required to provide 80% capture and treatment of the average annual runoff volume per the Newhall Ranch Specific Plan Sub-Regional Stormwater Mitigation Plan treatment performance standard. The design of the facility would be tailored to soil and hydrogeologic conditions in the facility location:
 - ~~**Bioretention:** Bioretention areas are vegetated (i.e., landscaped) shallow depressions that provide storage, infiltration, and evapotranspiration, and also provide for pollutant removal (e.g., filtration, adsorption, nutrient uptake) by filtering runoff through the vegetation and soils. In bioretention areas, as well as in vegetated swales, pore spaces and organic material in the soils help to retain water in the form of soil moisture and to promote the adsorption of pollutants (e.g.,~~

dissolved metals and petroleum hydrocarbons) into the soil matrix. Plants utilize soil moisture and promote the drying of the soil through transpiration.

- ~~*Vegetated Swales:* Vegetated swales are engineered, vegetation lined channels that provide water quality treatment in addition to conveying runoff. Swales provide pollutant removal through settling and filtration in the vegetation (often grasses) lining the channels and also provide the opportunity for volume reduction through infiltration and evapotranspiration. Swales are most effective where longitudinal slopes are small (2 percent to 6 percent), thereby increasing the residence time for treatment, and where water depths are less than the vegetation height.~~



SOURCE: Geosyntec Consultants – September 2011

FIGURE 4.3-3

Project Design Features



SOURCE: Geosyntec Consultants – April 2011

FIGURE 4.3-4

Examples of Infiltration, Bioinfiltration, and Biofiltration Facilities

Figure 4.3-4 — Conceptual Illustration of a Vegetated Swale

Figure 4.3-5 — Conceptual Illustration of a Water Waste Basin

~~**Extended Detention Basins:** Extended detention basins (EDBs) store stormwater runoff for sufficient periods of time to promote the removal of pollutants primarily through sedimentation. Dry extended detention basins are designed with outlets that detain the runoff volume from the water quality design storm for some minimum time (in this case, 48 hours) to allow particulates and associated pollutants (phosphorus, trace metals, some pesticides, and other pollutants) to settle out. These basins are not designed or anticipated to contain standing water for periods in excess of 48 hours. The EDBs also would incorporate a series of gravel filled subsurface flow trenches that would provide water quality treatment and facilitate evapotranspiration (ET) and percolation of dry weather flows and small storm events within the basin footprint. As runoff flows through the trenches, pollutant removal is achieved through settling and biological uptake of nutrients and dissolved pollutants within the wetland plants that would grow within the trenches, filtration within the trench gravel, and percolation into underlying soils. In addition, a specially constructed dry well that would support deep subsurface percolation of dry weather flows that may exceed the capacity of the gravel trenches would be provided. It is anticipated that the dry well would receive water primarily during the winter months, when ET rates are lower. The Regional Infiltration/Biofiltration Facilities would provide a combination of volume reduction for the full LID design volume and treatment of 80 percent of the average annual runoff volume. Volume reduction would be provided via infiltration below the lowest surface discharge of the facility and via water retained in soil pores. In biofiltration media, sediment and sediment-bound pollutants are removed by filtration. Pore spaces and organic material in the soils help to retain water in the form of soil moisture and to promote the adsorption of pollutants (e.g., dissolved metals and petroleum hydrocarbons) into the soil matrix. Plants utilize soil moisture and promote the drying of the soil. Extended detention would provide pollutant removal through settling and biological uptake of nutrients and dissolved pollutants within the vegetation that would grow within the facilities.~~

Table 4.3-15
Parcel-based LID BMP Tributary Areas and Design Requirements
(new table)

Parcel-based BMP Type	Tributary Area (acres)	Design Requirements
Category 1: Infiltration Feasible	38.9	Retention of runoff produced by design storm
Category 2: Bioinfiltration	86.3	Capture and biotreatment of runoff produced by design storm; partial infiltration

Parcel-based BMP Type	Tributary Area (acres)	Design Requirements
Single-Family Hydrologic Source Controls	28.1	Rooftops, patios, walkways routed to pervious areas capable of managing runoff from the 0.75 inch storm event.
Routed Directly to Sub-regional BMPs or Treatment BMPs (Green Streets and Media Filters) ¹	123.4	See Design Requirements in Table 4.3-16 below

Source: Geosyntec, 2011

¹ This represents the areas that are not directed to parcel-based BMPs prior to treatment in Sub-regional BMPs or Treatment BMPs. Other areas are treated by the specified parcel-based BMP prior to treatment in the sub-regional and treatment BMPs.

Table 4.3-16
Sub-Regional BMP Tributary Areas and Design Requirements
(new table)

Sub-Regional BMP TYPE	Tributary Area (acres)	Design Requirements
Sub-Regional Bioinfiltration Facilities	203.8	80% capture of average annual volume from tributary area; retention of runoff required to meet LID Performance standard (after accounting for parcel-based retention)
Sub-Regional Biofiltration Facility	56.7	80% capture of average annual volume from tributary area

Source: Geosyntec, 2011

Table 4.3-17
Treatment BMP Tributary Areas and Design Requirements
(new table)

TREATMENT BMP TYPE	Tributary Area (acres)	Design Requirements
On-site Treatment (Media Filter or Equivalent)	8.0	80% capture of average annual volume from tributary area
On-site Biofilter Swales (or Equivalent)	8.2	80% capture of average annual volume from tributary area
Off-site Biofilter Swales	103.6	80% capture of average annual volume from tributary area

Source: Geosyntec, 2011

~~Table 4.3-17~~
~~Vegetated Swale Treatment Control BMPs~~

c. Hydromodification Control BMPs

Post-development flows would be directed to the Santa Clara River after treatment; no flows would be directed to tributaries to the Santa Clara River. A series of progressive hydromodification control measures would be used to prevent and control hydromodification impacts to the Santa Clara River:

- Avoid, to the extent possible, the need to mitigate for hydromodification impacts by preserving natural hydrologic conditions and protecting sensitive hydrologic features, sediment sources, and sensitive habitats.
- Minimize the effects of development through ~~low-impact~~ site design practices (e.g., reducing connected impervious surfaces) and implementation of stormwater volume-reducing LID BMPs (project-based hydrologic source control).
- Mitigate hydromodification impacts in-stream using geomorphically based channel design.

The hydromodification control measures are summarized below.

- Low Impact/Site Design.** ~~Low impact/Site design PDFs that help to reduce the increase in runoff volume include the clustering of development into village areas, leaving large amounts of undeveloped open space within the Specific Plan subregion (of which Landmark Village is a part); routing stormwater runoff to vegetated areas and/or vegetated LID BMPs; use of native or non-native/non-invasive plants in landscaped areas; and the use of efficient irrigation systems in common area landscaped areas. The tract map project's development design and footprint accommodates "natural stream channel" activity. This includes establishing buffer zones and maintaining setbacks to allow for channel movement and adjustment to changes in energy associated with runoff as recommended by the Southern California Coastal Water Research Project (SCCWRP) Technical Report 450. (SCCWRP, 2005a. Effects of Increases in Peak Flows and Imperviousness on the Morphology of Southern California Streams. Technical Report 450. April 2005.)~~
- Volume Reduction BMPs.** ~~The project's treatment control LID BMP PDFs also would serve as hydromodification source control BMPs. Parcel-based and regional LID BMPs would provide volume reduction ranging from incidental volume reduction in biofiltration BMPs (via evaporation and infiltration) up to full volume reduction of captured water in infiltration BMPs where soil and hydrogeologic conditions permit. Vegetated swales, bioretention areas, and extended detention basins can provide volume reduction on the order of 20 to 30 percent through infiltration and evaporation. (See County of Los Angeles Low Impact Development Standards Manual, January 2009.) Using conservative values for volume reduction, the treatment control PDFs are estimated to reduce the increase in average annual stormwater runoff volume by approximately 57 acre feet per year, which is a 19 percent reduction of the predicted average post-development stormwater runoff volume without the treatment control PDFs. In addition, these facilities also would receive and eliminate dry weather flows.~~
- Geomorphically Based Channel Design.** The hydromodification management approach for the Santa Clara River also would incorporate "geomorphically referenced" channel design, as described in SCCWRP Technical Report 450 (SCCWRP, 2005a). The goal of this approach is to preserve the natural stream channel function to the maximum extent practicable while limiting instability in stream channel morphology. The project's development footprint would allow for the greatest freedom possible for "natural stream channel" activity. This includes establishing buffer zones and maintaining setbacks to allow for channel movement and adjustment to changes in energy associated with runoff.

The engineered structural elements that would be implemented where needed for the Santa Clara River stability include energy dissipation and geomorphically-referenced bank stabilization, pursuant to the Newhall Ranch Resource Management and Development Plan.

- Energy Dissipation.** Energy dissipation at storm drain outfalls provides erosion protection in areas where discharges have the potential to cause localized stream erosion. Erosion protection would be provided at all storm drain outlets to the Santa Clara River.
- Bank Stabilization.** The project would include ~~buried-soil cement~~ bank stabilization and utility corridor bank stabilization, as shown on (Revised) Figure 1.0-23 and (New) Figure 1.0-23a, which are found in Section 1.0, Project Description, of the Final EIR, along the Santa Clara River and Castaic Creek adjacent to and downstream of the project site. In total, approximately 18,600 linear feet (LF) of bank would be provided with buried soil cement protection. This would include

~~approximately 11,000 feet fronting the tract map site and approximately 6,400 LF on the south bank downstream (west) of the Long Canyon Road Bridge. Additional buried bank stabilization would be constructed as part of the approved Newhall Ranch WRP and between The Old Road and the Santa Clara River to protect the utility corridor. The bank protection between The Old Road and the Santa Clara River was approved as part of the Santa Clara River Natural River Management Plan (NRMP).~~

Most of the proposed bank protection would consist of buried soil cement to provide scour and freeboard flood control protection. Soil cement is a modern flood control technique used to protect against erosion while maintaining natural vegetation and soft banks. Soil cement would be buried below the existing banks of the Santa Clara River. Disturbed areas would then re-vegetated with native plant species, maintaining the natural habitat presently found along the River.

Approximately 6,600 LF of Turf Reinforcement Mat (TRM) or similar bank stability protection would be provide along the southern edge of the utility corridor downstream or west of the tract map site. TRMs are designed to reinforce vegetation at the root and stem allowing vegetation to be used as erosion control in areas where flow conditions exceed the ability of natural vegetation to remain rooted. This includes applications with high slopes or stream banks where grouted rip-rap and concrete channels are aesthetically undesirable.

In summary, the Landmark Village PDFs for water quality and hydrologic impacts have been created to address the Landmark Village LID Performance Standard~~SUSMP requirements~~ and include site design, source control, LID, treatment control, and hydromodification control BMPs.

7. PROJECT IMPACTS

The analysis of potential impacts to water quality associated with construction and operation of the proposed project, including the significance criteria applicable to assessing such impacts, is presented below.

a. Significance Threshold Criteria

Based on the guidance offered by the *State CEQA Guidelines*, applicable water quality standards, and potential project impacts, the following thresholds of significance are utilized:

(1) Surface Water Quality

Thresholds of significance for surface water quality impacts have been developed based on a review of the MS4 Permit, Construction General Permit, Dewatering General Permit, applicable receiving water

quality standards, and the *State CEQA Guidelines*, Appendix G. Significant adverse water quality impacts are presumed to occur if the proposed project would:

- Create sizeable additional sources of polluted runoff that would be discharged to receiving waters, which would result in exceedances of receiving water quality or substantially degrade water quality in receiving waters;
- Create sizeable additional sources of polluted runoff that would violate any water quality standards or waste discharge requirements for surface water runoff; or
- Create sizeable additional sources of polluted construction site runoff (including polluted discharges associated with construction activities such as materials delivery, staging or storage, vehicle or equipment fueling, vehicle or equipment maintenance, waste handling, or hazardous materials handling or storage) that would violate any water quality standards or waste discharge requirements for surface water runoff or groundwater discharge.

This section analyzes whether sizeable additional sources of polluted runoff may result from the project based on the results of water quality modeling, qualitative assessments, and comparison with discharge requirements that take into account water quality controls or BMPs that are considered PDFs. Any deviation from, or failure to, comply with discharge requirements is considered a potentially significant adverse water quality impact. Further, increases in pollutant concentrations or loads in runoff resulting from project development are considered an indication of a potentially significant adverse water quality impact. If loads and concentrations resulting from development are predicted to stay the same or to be reduced when compared with existing conditions, it is concluded that the project would not cause a significant adverse impact to the ambient water quality of the receiving waters for that pollutant.

If pollutant loads or concentrations are expected to increase, then, for both the post-development and construction phases, potential impacts are assessed by evaluating compliance of the project, including PDFs, with applicable regulatory requirements of the MS4 Permit, including SQMP and SUSMP requirements, the LID Performance Standard, the Construction General Permit, and the General Dewatering Permit. Further, post-development increases in pollutant loads and concentrations are evaluated by comparing the magnitude of the increase to relevant benchmarks, including receiving water TMDLs and receiving water quality objectives from the Basin Plan and CTR.

(2) Hydromodification

Thresholds of significance for evaluating hydrologic impacts and conditions of concern have been developed based on a review of the MS4 Permit and the *State CEQA Guidelines*, Appendix G. Significant adverse impacts to natural drainage systems created by altered hydrologic conditions of concern are presumed to occur if the proposed project would:

- Substantially alter the existing drainage pattern of a natural drainage, stream, or river, thereby causing substantial erosion, siltation, or channel instability in a manner that substantially adversely affects beneficial uses; or
- Substantially increase the rates, velocities, frequencies, duration, and/or seasonality of flows, thereby causing channel instability and harming sensitive habitats or species in natural drainages in a manner that substantially adversely affects beneficial uses.

(3) Groundwater

Thresholds of significance for evaluating the hydrologic and water quality impacts of the project on groundwater have been developed based on the *State CEQA Guidelines*, Appendix G. Significant adverse impacts to groundwater are presumed to occur if the proposed project would:

- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge so as to cause a net deficit in aquifer volume or a lowering of the local groundwater table; or
- Through changes in surface water runoff quality and quantity (including project ~~treatment-LID BMP~~ PDFs), and changes in groundwater recharge, result in a violation of any groundwater quality standards or waste discharge requirements or otherwise substantially degrade water quality.

Groundwater quality benchmarks were compared with post-development runoff water quality to establish the likelihood that runoff would result in a degradation of groundwater quality. The hydrologic effects of the project on groundwater were examined by comparison of historical and present levels of the underlying aquifer to determine the impact of development on aquifer volume.

b. Methodology for Evaluating Post-Development and Surface Water Quality Impacts

(1) Computer Modeling

A water quality model was used to estimate pollutant loads and concentrations in project stormwater runoff for certain pollutants of concern for pre-development conditions and post-development conditions with PDFs for the tentative map portion of the project. The water quality model is one of the few models that accounts for observed variability in stormwater hydrology and water quality. This is accomplished by characterizing the probability distribution of observed rainfall event depths, the probability distribution of EMCs and the probability distribution of the number of storm events per year. These

distributions are then sampled randomly using a “Monte Carlo Approach”²⁵ to develop estimates of mean annual loads and concentrations. A detailed description of the water quality model is presented in Recirculated Draft EIR **Appendix 4.3**. The following summarizes major features of the water quality model:

- **Rainfall Data:** The water quality model estimates the volume of runoff from storm events. The storm events were determined from 32 years (1969–2002) of hourly rainfall data measured at the National Climatic Data Center (NCDC) Newhall rain gauge that incorporates a wide range of storm events. The rainfall analysis that is incorporated in the water quality model requires rainfall measurements at one-hour intervals and a period of record that is at least 20 to 30 years in length.
- **Land Use Runoff Water Quality:** The water quality model estimates the concentration of pollutants in runoff from storm events based on existing and proposed land uses. The pollutant concentrations for various land uses, in the form of EMCs, were estimated from data collected in Los Angeles County. The Los Angeles County database was chosen for use in the model because: (1) it is an extensive database that is quite comprehensive; (2) it contains monitoring data from land use specific drainage areas; and (3) the data is representative of the semi-arid conditions in southern California. Agriculture land use EMC statistics were not available from the Los Angeles County database, and, therefore, were derived from the Ventura County stormwater quality monitoring database.
- **Pollutant Load:** The pollutant load associated with each storm is estimated as the product of the storm event runoff times the EMC. For each year in the simulation, the individual storm event loads are summed to estimate the annual load. The mean annual load is then the average of all the annual loads.
- ~~**PDFs Modeled:** The modeling only considers the structural treatment PDFs (e.g., vegetated swales, bioretention areas, and dry extended detention basin) and does not take into account the low impact/site design and source control PDFs (e.g., street sweeping and catch basin inserts) that also would improve water quality. In this respect, the modeling results are conservative and tend to overestimate pollutant loads and concentrations.~~
- **Treatment Effectiveness:** The water quality model estimates mean pollutant concentrations and loads in stormwater following treatment. The amount of stormwater runoff that is captured by the

²⁵ The Monte Carlo Approach is a method of water quality impact analysis that combines project-specific watershed and BMP characterizations, mechanistic estimates of hydrology and hydraulics, and statistical descriptions of rainfall, runoff water quality and BMP effectiveness to provide statistical estimates runoff volumes, pollutant loads, and pollutant concentrations under specified conditions. Watershed and BMP characterization inputs are developed from a variety of spatial and non-spatial data including existing condition delineations and land uses, proposed land uses and drainage plans, and proposed BMP types, sizes and operational parameters. Estimates of watershed runoff coefficients and BMP capture efficiency are generated in the Storm Water Management Model (SWMM) and aggregated by storm event. Statistical descriptions of rainfall are developed from actual rainfall records and Monte Carlo simulations sample directly from these records. Statistical descriptions of land use runoff concentrations and BMP effluent concentrations are input as statistical distributions of Event Mean Concentrations (EMCs) developed from land use runoff water quality data sampled by Los Angeles and Ventura Counties and water quality data from the ASCE/EPA International BMP Database, respectively. Monte Carlo simulations sample from these distributions to estimate runoff water quality by land use for each storm event and BMP effluent quality by BMP type for each storm event. The Approach employs simplified rainfall-runoff relationships and volume-based pollutant generation and routing.

~~treatment-LID BMPs~~ was calculated for each storm event, taking into consideration the intensity of rainfall, duration of the storm, and duration between storm events. The amount of stormwater runoff that is reduced by the LID BMP (i.e., captured and does not discharge) was calculated for each storm event taking into consideration the intensity of rainfall, the duration of the storm, the geometric design of the LID BMP, the infiltration rate of underlying soils, and the monthly normal evaporation rates. The USEPA Stormwater Management Model Version 4.4h (SWMM4.4) was used to perform these calculations. The mean effluent water quality for ~~treatment-LID BMPs~~ (water captured and discharged) was based on the International Stormwater BMP Database. (American Society of Civil Engineers [ASCE], 2001. User's Guide National Stormwater Best Management Practices (BMP) Database Version 1.2. Prepared by Urban Water Resources Research Council of ASCE and Wright Water Engineers, Inc., Urban Drainage and Flood Control District, URS Greine Woodward Clyde, in cooperation with Office of Water US EPA, Washington, DC. March 2001/US EPA, 2003. ~~Ecological Soil Screening Level for Aluminum. EPA OSWER directive 9285.7-60, November 2003. County of Los Angeles Low Impact Development Standards Manual, January 2009.~~ The version of the International Stormwater BMP Database used for the analysis was based on the most recent studies available in January 2011. The International Stormwater BMP Database was used because it is a robust, peer reviewed database that contains a wide range of BMP effectiveness studies that are reflective of diverse land uses. ~~An analysis of the monitored inflow and outflow data contained in the International Stormwater BMP Database showed a volume reduction on the order of 38 percent for biofilters and 30 percent for extended detention basins. (Strecker, E. et al., 2004. Analyses of the Expanded EPA/ASCE International BMP Database and Potential Implications for BMP Design, World Water and Env't. Cong. Proc. (June 27-July 1, 2004).) Based on this analysis, a conservative estimate of 25 percent of the inflow to the vegetated swales and bioretention areas, and 20 percent of the inflow to extended detention basins was assumed to infiltrate and/or evapotranspire in the water quality model. These assumptions regarding volumetric losses also were used to assess the quantity of dry weather flows that would be captured in the treatment BMPs.~~ (See Section 7.8.2 of the Water Quality Technical Report in Recirculated ~~Draft~~ EIR **Appendix 4.3.**)

BMP effectiveness studies in the International Stormwater BMP database infrequently monitor aluminum; therefore, insufficient effluent data were available to model the removal effectiveness of ~~treatment control~~ LID BMPs for this water quality constituent. The total aluminum content of a water sample will be directly related to the concentrations of the suspended particulate matter. The aluminum content of the suspended solids is likely to directly reflect the composition of the source materials (e.g., the catchment soils). Therefore, it would be expected and is assumed that total aluminum concentrations and loads would be reduced proportionally to removal of suspended solids by project BMPs. In order to estimate the reduction in total aluminum load and concentration (dissolved aluminum was assumed to pass through BMPs without removal), TSS removal was used as a surrogate.

- **Bypass Flows:** The water quality model takes into account conditions when the ~~treatment facility~~ LID BMP is full and flows are bypassed.

- **Representativeness to Local Conditions:** The water quality model utilizes runoff water quality data obtained from tributary areas that have a predominant land use, and as measured prior to discharge into a receiving water body. Currently such data are available from stormwater programs in Los Angeles County, San Diego County, and Ventura County, although the amount of data available from San Diego County and Ventura County is small in comparison with the Los Angeles County database. Such data is often referred to as “end-of-pipe” data to distinguish it from data obtained in urban streams, for example.
- **Infiltration:** Existing condition infiltration parameters for the watershed surfaces were assumed based on soil hydrologic group, soil texture class, and the NRCS Soil Survey of the project area. The majority of the site would be impacted by fill operations; therefore, post-development soil compaction impacts were modeled for post-development open and landscaped areas assuming a 25 percent reduction in saturated hydraulic conductivity, or infiltration rate, from the pre-developed to post-developed condition. Impervious surfaces were modeled assuming no infiltration. Sub-surface infiltration rates in areas where parcel-based and regional LID BMPs would be located were estimated based on inspection of soils and geologic maps relative to the infiltration rates that would be expected in regional facility locations and fill areas (RT Frankian and Associates, Personal Communication, January 2011).

(a) **Pollutants of Concern**

Pollutants Modeled

The appropriate form of data used to address water quality are flow composite storm event samples, which are a measure of the average water quality during the event. To obtain such data usually requires automatic samplers that collect data at a frequency that is proportionate to flow rate. The pollutants of concern for which there are sufficient flow composite sampling data in the Los Angeles County database are:

- Total Suspended Solids
- Total Phosphorus
- Nitrate-Nitrogen, Nitrite-Nitrogen, Ammonia-Nitrogen, and Total Nitrogen (TN)
- Total Aluminum
- Dissolved Copper

Hydrocarbons are difficult to measure because of laboratory interference effects and sample collection issues (hydrocarbons tend to coat sample bottles). Hydrocarbons typically are measured with single grab samples, making it difficult to develop reliable EMCs.

Pesticides in urban runoff are often at concentrations that are below detection limits for most commercial laboratories and, therefore, there is limited statistically reliable data available on pesticides in urban runoff. Pesticides were not detected in Los Angeles County monitoring data for land use-based samples, except for diazinon and glyphosate, which were detected in less than 15 percent and 7 percent of samples, respectively. (LACDPW, 2000. Los Angeles County 1994–2000 Integrated Receiving Water Impacts Report.)

Turbidity, trash and debris, MBAS, and cyanide typically are not included in routine urban stormwater monitoring programs, and turbidity typically is not included in post-construction treatment control BMP effectiveness studies. Several studies conducted in the Los Angeles River basin have attempted to quantify trash generated from discrete areas, but the data represent relatively small areas and/or relatively short periods. MBAS was included in the land use-based monitoring data, but not enough data is available for modeling purposes. Cyanide was not included in the Los Angeles County land use-based monitoring program.

Also addressed qualitatively are potential water quality impacts from runoff and dewatering discharges during construction, potential water quality impacts due to pollutant bioaccumulation, and dry weather runoff water quality impacts.

(c) LID Performance Standard Retention Volume Conformance Analysis

The Project LID Performance Standard establishes minimum requirements for stormwater retention. An analysis was performed to demonstrate that the proposed LID BMP PDFs would provide retention volume equivalent to or greater than the Project LID Performance Standard retention volume. The following stepwise process was used to show conformance with the LID Performance Standard Retention Volume.

Step 1: Calculate LID Performance Standard

The retention volume required to meet the Project LID Performance Standard was calculated as described below.

- Tabulate non-jurisdictional project area (includes vesting tentative tract map and associated off-site project areas, minus the River Corridor).
- Calculate project total impervious area. This calculation was based on proposed land uses and average impervious rates for these land uses.

- Calculate project allowable impervious area. This was calculated as five percent of the total project area as described in the Project LID Performance Standard.
- Calculate the remaining impervious area as the difference between the total impervious area and the allowable impervious area
- Calculate runoff from the remaining impervious area for the first 0.75 inches of precipitation per the method described in the Ventura County Technical Guidance Manual (TGM):
 - a. $V \text{ (ac-ft)} = \text{Remaining Impervious Area (ac)} \times 0.75 \text{ inches} \times 0.95 \text{ runoff coefficient} \times (1\text{ft}/12 \text{ inches units conversion})$
- The resulting retention storage volume is the LID Performance Standard retention volume that would apply to the Project. This performance standard is expressed in acre-feet.

Step 2: Calculate Retention Volume in Land Use BMPs (Onsite)

The retention volume provided in parcel-based LID BMPs was calculated based the application of the Project LID Performance Standard (Figure 4.3-2, Project LID Performance Standard) to the Project land uses and infiltration constraints.

- Categorize institutional, commercial, multi-family residential, recreation, and park land use parcels by the infiltration constraint category and calculate the area of each category of parcel-based LID BMPs. This analysis was conducted using spatial datasets characterizing infiltration feasibility factors, including depth to groundwater, natural, undisturbed soil infiltration rate, net depth of proposed cut and fill, and geotechnical hazards. These datasets were overlain to characterize project areas based on the following criteria:
 - Category 1 - Infiltration Feasible – depth to seasonally high groundwater greater than 10 feet; net depth of fill less than 10 feet; natural, undisturbed infiltration rate greater than 0.5 inches per hour; and no identified geotechnical hazards related to infiltration of stormwater.
 - Category 2 - Infiltration Partially Feasible – depth to seasonally high groundwater greater than 10 feet and no identified geotechnical hazards related to infiltration of stormwater (any depth of fill or natural, undisturbed infiltration rate)
 - Category 3 - Infiltration Infeasible –depth to seasonally high groundwater less than 10 feet; geotechnical hazard identified that would preclude infiltration
- Calculate the retention volume per BMP area provided in parcel-based LID BMPs and sum the retention volume provided in all parcel-based LID BMPs.
 - Category 1 - Infiltration Feasible – Infiltration BMPs: Sum all volume provided in BMPs below the overflow elevation.

- Category 2 - Infiltration Partially Feasible - Bioinfiltration BMPs: Sum all volume provided below underdrains and retained in soil pores.
- Category 3 - Infiltration Infeasible – Biofiltration BMPs: Sum all volume retained in soil pores.
- Calculate acreage of single family detached land uses and calculate retention volume associated with infiltration and evapotranspiration by Single Family HSCs:
 - Estimate area of rooftops, patios, and walkways based on typical lot dimensions and setbacks.
 - Calculate volume of runoff from roofs, patios, and walkways for the first 0.75 inches of rainfall and tabulate this volume as retention storage.

Step 3: Calculate Retention Volume in Regional Infiltration/Biofiltration Facilities

Calculate the total storage volume provided in regional infiltration/ biofiltration facilities below the lowest discharge point. All retention volume provided in regional infiltration/bioinfiltration facilities was added together.

- Retention volume in Regional Infiltration Facilities A and B would include all volume below the facility overflow elevation.
- Retention volume in Regional Bioinfiltration Facility C would include volume in a layer of rock below the facility underdrains and volume retained in the pore space of biofiltration media.
- Retention volume in Regional Biofiltration Facilities D and E would include volume retained in the pore space of biofiltration media.

Step 4: Compare Total Retention Volume Provided to LID Performance Standard

The total retention volume provided in parcel-based BMPs and regional LID BMPs (regional infiltration/biofiltration facilities) from Steps 2 and 3, respectively, was compared to the Project LID Performance Standard retention volume computed in Step 1. The Project is considered to meet the Project LID Performance Standard if the total retention storage volume provided is equal to or greater than the Project LID Performance Standard retention volume.

c. Impact Analysis

(1) Construction-Related Impacts

The analysis of potential impacts of construction activities, construction materials, and non-stormwater runoff on water quality during the construction phase is focused primarily on sediment (TSS and turbidity) and certain non-sediment related pollutants. Construction-related activities that expose soils to potential mobilization by rainfall/runoff and wind are primarily responsible for sediment releases. Such activities include the removal of vegetation from the project site, grading, and trenching for infrastructure improvements. Environmental factors that affect erosion include topographic, soil and rainfall characteristics. Non-sediment-related pollutants associated with waste construction materials (e.g., paint, stucco, etc); chemicals, liquid products, and petroleum products used in building construction or the maintenance of heavy equipment; and concrete-related pollutants also are of concern during construction.

**Table 4.3-18
SUSMP Requirements and Corresponding Project Design Features**

SUSMP Requirement	Criteria/Description	Corresponding Landmark Village PDFs
1. Runoff Flow Control	<ul style="list-style-type: none"> • Control post-development peak stormwater runoff discharge rates, velocities, and duration in natural drainage systems to prevent accelerated downstream erosion and to protect habitat-related beneficial uses.¹ • All post-development runoff from a 2-year, 24-hour storm shall not exceed the pre-development peak flow rate, burned, from a 2-year, 24-hour storm when the pre-development peak flow rate equals or exceeds five cfs. Discharge flow rates shall be calculated using the County of Los Angeles Modified Rational Method. • Post-development runoff from the 50-year capital storm shall not exceed the pre-development peak flow rate, burned and bulked, from the 50-year capital storm. • Control peak flow discharge to provide stream channel and over bank flood protection, based on flow design criteria selected by the local agency. 	<ul style="list-style-type: none"> • Hydromodification source controls include minimizing impervious surfaces through clustering development and using <u>parcel-based LID BMPs, regional LID BMPs, and Single Family HSCs (see Figure 4.3-2)</u>bioretention, extended detention, and other vegetated treatment control BMPs to disconnect impervious surfaces and reduce runoff volumes through evapotranspiration and infiltration. • The volume reduction PDFs are estimated to reduce the increase in average annual stormwater runoff volume by approximately 57-123 acre-feet per year, which is a 19-32 percent reduction of the predicted average post-development stormwater runoff volume without the treatment-LID control PDFs. In addition these facilities also would receive and eliminate dry weather flows. • The 50-year capital storm peak flow rate analysis is contained in the <i>Landmark Village Tentative Tract Map 53108 Drainage Concept</i>, prepared by Psomas. (Psomas, 2006. Landmark Village Tentative Tract Map 53108 Drainage Concept. Prepared for Newhall Land and Farming Company by Psomas.) (See Recirculated Draft EIR Appendix 4.2.)

SUSMP Requirement	Criteria/Description	Corresponding Landmark Village PDFs
<p>2. Conserve Natural Areas</p>	<ul style="list-style-type: none"> • Concentrate or cluster development on portions of a site while leaving the remaining land in a natural undisturbed condition. • Limit clearing and grading of native vegetation at a site to the minimum amount needed to build lots, allow access, and provide fire protection. • Maximize trees and other vegetation at each site, planting additional vegetation, clustering tree areas, and promoting the use of native and/or drought tolerant plants. • Promote natural vegetation by using parking lot islands and other landscaped areas. • Preserve riparian areas and wetlands. 	<ul style="list-style-type: none"> • The Newhall Ranch Specific Plan clusters development into villages, including Landmark Village. Approximately 70<u>74</u>% (8,335<u>10,145</u> acres) of the Specific Plan subregion will remain undeveloped. • Approximately 71,359.6 acres of the 292.6 acre Landmark Village project area would accommodate trails, parks, vegetated slopes, <u>open space</u>, and water quality BMPs. • The existing land use on the project site is agriculture, so little or no native vegetation is found in pre-development conditions. • Site clearing and grading would be limited allowing development, and promoting access and fire protection. • Native and/or non-native/non-invasive vegetation would be utilized throughout Newhall Ranch. • The final project stormwater system would include the use of <u>the parcel-based LID BMPs, including, but not limited to, infiltration, bioinfiltration, and biofiltration BMPs placed in common area landscaping in commercial, multi-family residential, institutional, recreational, and park areas, roadway median strips, and parking lot islands (where applicable) and regional infiltration/ biofiltration facilities incorporating natural vegetation.</u> • the vegetated treatment BMPs, including bioretention (placed in common area landscaping in commercial and multi family

SUSMP Requirement	Criteria/Description	Corresponding Landmark Village PDFs
		<p>residential areas, roadway median strips and parking lot islands (where applicable)), vegetated swales, and extended detention basins.</p> <ul style="list-style-type: none"> Riparian buffers would be preserved along the Santa Clara River Corridor by clustering development upland and away from the River.

SUSMP Requirement	Criteria/Description	Corresponding Landmark Village PDFs
<p>3. Minimize Stormwater Pollutants of Concern</p>	<ul style="list-style-type: none"> Minimize, to the maximum extent practicable, the introduction of pollutants of concern that may result in significant impacts generated from site runoff of directly connected impervious areas (DCIA) to the stormwater conveyance system, as approved by the building official. 	<ul style="list-style-type: none"> <u>LID BMPs would be selected to address the pollutants of concern for the Project. These LID BMPs include infiltration, bioinfiltration, and biofiltration BMPs implemented at the parcel-scale, media filters units implemented in right-of-ways, USEPA Green Streets practices implemented in right-of-ways, as feasible, and regional infiltration/ biofiltration facilities. These BMPs are designed to minimize introduction of pollutants to the Maximum Extent Practicable (MEP).</u> Treatment control BMPs would be selected to address the pollutants of concern for the project. These BMPs are designed per SUSMP standards to minimize introduction of pollutants to the MEP. The project would include numerous source controls, including education programs, animal waste bag stations, street sweeping and catch basin cleaning, an Integrated Pest Management (IPM) Program for common area landscaping in commercial areas and multi-family residential areas, use of native and/or non-native/non-invasive, <u>climate appropriate vegetation, use of smart irrigation control</u> vegetation, and installation of a car wash pad in multi-family residential areas. An education program would be implemented, targeting residents and commercial businesses, regarding water quality issues. Topics would include services that could affect water quality, such as carpet cleaners and others that may not properly dispose of cleaning wastes; community car washes; and residential car washing. The education program would

SUSMP Requirement	Criteria/Description	Corresponding Landmark Village PDFs
		<p>emphasize animal waste management, such as the importance of cleaning up after pets and not feeding pigeons, seagulls, ducks, and geese.</p> <ul style="list-style-type: none"> • Vegetated <u>LID</u> treatment control BMPs would allow for infiltration of treated stormwater. • Landscape watering in common areas, commercial areas, multiple family residential areas, and in parks would use efficient reclaimed water irrigation technologies with centralized irrigation controls.
<p>4. Protect Slopes and Channels</p>	<p>Project plans must include BMPs consistent with local codes and ordinances and the SUSMP requirements to decrease the potential of slopes and/or channels from eroding and impacting stormwater runoff:</p> <ul style="list-style-type: none"> • Convey runoff safely from the tops of slopes and stabilize disturbed slopes. • Utilize natural drainage systems to the maximum extent practicable. • Control or reduce or eliminate flow to natural drainage systems to the maximum extent practicable. • Stabilize permanent channel crossings. • Vegetate slopes with native or drought tolerant vegetation. • Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion with the approval of all agencies with jurisdiction, e.g., the ACOE and the CDFG. 	<ul style="list-style-type: none"> • There are no significant slopes or natural drainage channels within the developed portion of the project in the post-developed condition. • Natural slopes and native vegetation on slopes adjacent to the Santa Clara River would be preserved and/or, if impacted during construction, restored and enhanced. Native vegetation would be used in all plant palettes placed on restored slopes. • Project PDFs, <u>parcel-based BMPs, regional LID BMPs, and Single Family HSCs, and USEPA Green Streets practices including swales, bioretention areas, and water quality basins</u> (hydrologic source controls), would reduce flows to natural channels through infiltration and evapotranspiration. • The banks of the Santa Clara River at portions of this site would be stabilized primarily using buried bank stabilization, per the Newhall Ranch Resource Management and Development Plan (RMDP). After the implementation of these measures and other flow control and volume reduction PDFs, the Santa Clara River would be capable of handling the expected flow volumes, velocities, and durations with little or no erosion. • All outlet points to the Santa Clara River would include localized energy dissipaters per the RMDP.

SUSMP Requirement	Criteria/Description	Corresponding Landmark Village PDFs
5. Provide Storm Drain System Stenciling and Signage	<ul style="list-style-type: none"> • All storm drain inlets and catch basins within the project area must be stenciled with prohibitive language and/or graphical icons to discourage illegal dumping. • Signs and prohibitive language and/or graphical icons, which prohibit illegal dumping, must be posted at public access points along channels and creeks within the project area. • Legibility of stencils and signs must be maintained. 	<ul style="list-style-type: none"> • All storm drain inlets and water quality inlets would be stenciled or labeled. • Signs would be posted in areas where dumping could occur. • The County, a Landscape or Local Maintenance District (LMD), Home Owners Association (HOA), or other maintenance entity would maintain stencils and signs.
6. Properly Design Outdoor Material Storage Areas	<ul style="list-style-type: none"> • Where proposed project plans include outdoor areas for storage of materials that may contribute pollutants to the stormwater conveyance system measures to mitigate impacts must be included. 	<ul style="list-style-type: none"> • Pesticides, fertilizers, paints, and other hazardous materials used for maintenance of common areas, parks, commercial areas, and multifamily residential common areas would be kept in enclosed storage areas.
7. Properly Design Trash Storage Areas	<p>All trash containers must meet the following structural or treatment control BMP requirements:</p> <ul style="list-style-type: none"> • Trash container areas must have drainage from adjoining roofs and pavement diverter around the areas. • Trash container areas must be screened or walled to prevent off-site transport of trash. 	<ul style="list-style-type: none"> • All outdoor trash storage areas would be covered and isolated from stormwater runoff.

SUSMP Requirement	Criteria/Description	Corresponding Landmark Village PDFs
<p>8. Provide Proof of Ongoing BMP Maintenance</p>	<ul style="list-style-type: none"> Applicant required to provide verification of maintenance provisions through such means as may be appropriate, including, but not limited to legal agreements, covenants, and/or Conditional Use Permits. 	<ul style="list-style-type: none"> Depending on the type and location of the BMP, either the County LMD, or HOA would be responsible for maintenance. The County would have the right, but not the duty, to inspect and maintain the BMPs that are maintained by the HOA or LMD, at the expense of the HOA or LMD, if they are not being properly maintained. The HOA or commercial/business owners would be responsible for operation and maintenance of site<u>parcel</u>-based BMPs (such as bioretention placed in common area landscaping <u>and downspouts disconnected to percolation trenches</u>in multi family residential areas and commercial areas). The LACDPW will be responsible for maintenance of village-level and subregional BMPs (vegetated swales and extended detention basins).

SUSMP Requirement	Criteria/Description	Corresponding Landmark Village PDFs
<p>9. Design Standards for Structural or Treatment Control BMPs</p>	<ul style="list-style-type: none"> Post-construction Structural or Treatment Control BMPs shall be designed to mitigate (infiltrate or treat) stormwater runoff using either volumetric treatment control BMPs or flow-based treatment control BMPs sized per listed criteria. 	<ul style="list-style-type: none"> Stormwater treatment facilities <u>LID BMPs</u> would be designed to meet or exceed the sizing standards in the Los Angeles County SUSMP requirements. Volume-based treatment control BMPs for the project would be designed to capture 80 percent or more of the annual runoff volume per Criteria 2 of the MS4 Permit. Flow-based <u>treatment control</u> BMPs would be sized using Criteria 3, which will provide 80 percent capture of annual runoff volume per criteria of the MS4 Permit. The size of the facilities would be finalized during the design stage by the project engineer with the final hydrology study, which would be prepared and approved to ensure consistency with this analysis prior to issuance of a final grading permit. Types of <u>LID and</u> treatment control BMPs that would be employed include <u>parcel-based BMPs, regional LID BMPs, and Single Family HSCs, USEPA Green Streets practices, media filtration, vegetated swales, bioretention, and dry extended detention basins</u>, and a combination thereof.

SUSMP Requirement	Criteria/Description	Corresponding Landmark Village PDFs
<p>10.E.4. Properly Design Loading/Unloading Dock Areas (Automotive Repair Shops)</p>	<ul style="list-style-type: none"> • See requirement 10.B.1 above. 	<ul style="list-style-type: none"> • Automotive repair shop loading/unloading dock areas would comply with the design requirements.
<p>10.F.1. Properly Design Parking Area (Parking Lots)</p>	<ul style="list-style-type: none"> • Reduce impervious land coverage of parking areas. • Infiltrate runoff before it reaches the storm drain system. • Treat runoff before it reaches storm drain system. 	<ul style="list-style-type: none"> • <u>Commercial, multi-family, institutional, recreational, and park parking lots would incorporate parcel-based LID BMPs located in islands to promote filtration and infiltration of runoff.</u> • <u>Stormwater runoff from parking lots would be directed to LID BMPs, including infiltration, bioinfiltration, and biofiltration BMPs installed at the parcel scale and regional scale, and/or media filters in compliance with the Project LID Performance Standard.</u>Commercial and multi-family parking lots would incorporate bioretention facilities located in islands to promote filtration and infiltration of runoff. • Stormwater runoff from parking lots would be directed to treatment control BMPs, including swales, water quality basins, bioretention areas, and/or catch basin media filters in compliance with SUSMP requirements.
<p>10.F.2. Properly Design to Limit Oil Contamination and Perform Maintenance</p>	<ul style="list-style-type: none"> • Treat to remove oil and petroleum hydrocarbons at parking lots that are heavily used. • Ensure adequate operation and maintenance of treatment systems particularly sludge and oil 	<ul style="list-style-type: none"> • See above. • Treatment of runoff in detention basins, bioretention areas, or vegetated swales and catch basin inserts<u>LID BMPs</u> would be used to address oil and petroleum hydrocarbons from high-

SUSMP Requirement	Criteria/Description	Corresponding Landmark Village PDFs
(Parking Lots)	removal.	<p>use parking lots.</p> <ul style="list-style-type: none"> The HOA or business owners would be responsible for operation and maintenance of treatment control <u>LID</u> BMPs that serve private parking lots.
13. Limitation of Use of Infiltration BMPs	<ul style="list-style-type: none"> Infiltration is limited based on design of BMP, pollutant characteristics, land use, soil conditions, and traffic. Appropriate conditions (groundwater >10 feet from grade) must exist to utilize infiltration to treat and reduce stormwater runoff for the project. 	<ul style="list-style-type: none"> Per the RWQCB Clarification Letter, generally, the common pollutants in stormwater are filtered or adsorbed by soil, and unlike hydrophobic solvents and salts, do not cause groundwater contamination. In any case, infiltration of 1-2 inches of rainfall in semi-arid areas like Southern California where there is a high rate of evapo-transpiration, presents minimal risks. (LARWQCB, 2006. Letter to Mark Pastrella, Assistant Deputy Director, Department of Public Works, County of Los Angeles, from Jonathan Bishop, P.E., Executive Officer, California Regional Water Quality Control Board, Los Angeles Region. December 15, 2006.) The proposed treatment control BMPs are not considered infiltration BMPs; they allow for infiltration of fully treated runoff only.

Source: Geosyntec, 2008.

¹ This requirement is from Part 4, Section D.1, of the MS4 Permit.

(b) LID RequirementsLID Performance Standard Retention Volume Conformance Analysis

The results of the LID Performance Standard retention volume conformance analysis demonstrate that the project exceeds the Project LID Performance Standard retention volume requirements (Table 4.3-18a, LID Performance Standard Conformance Analysis Calculations).

Table 4.3-18a
LID Performance Standard Conformance Calculations

<u>Step 1: Calculate LID Performance Standard ¹</u>	
<u>Project Area, ac</u>	<u>293</u>
<u>Project Impervious Area, ac</u>	<u>169</u>
<u>Allowable Effective Impervious Area,% of project</u>	<u>5%</u>
<u>Allowable Effective Impervious Area, ac</u>	<u>15</u>
<u>Remaining Impervious Area, ac</u>	<u>155</u>
<u>Runoff from Remaining Impervious Acre for 0.75 inch Storm, ac-ft</u>	<u>9.2</u>

<u>Step 2: Calculate Retention Volume in Parcel-based BMPs</u>					
<u>Land Use Treatment Categories</u>	<u>Area, acres</u>	<u>Impervious Area, acres</u>	<u>BMP Area, acres</u>	<u>BMP Ret Depth, inches</u>	<u>BMP Retention Volume, ac-ft</u>
<u>Category 1</u>	<u>40.0</u>	<u>31.1</u>	<u>1.2</u>	<u>18.3</u>	<u>1.9</u>
<u>Category 2</u>	<u>87.6</u>	<u>67.4</u>	<u>2.7</u>	<u>9.0</u>	<u>2.0</u>
<u>Category 3</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>1.8</u>	<u>0.0</u>
<u>Single Family HSCs</u>	<u>16.8</u>	<u>8.4</u>	<u>8.4</u>	<u>0.75</u>	<u>0.5</u>
<u>Parcel-based Total, ac-ft</u>	=	=	=	=	<u>4.4</u>
<u>Step 3: Calculate Retention Volume in Regional Infiltration/Biofiltration Facilities</u>					
<u>Regional Infiltration/ Biofiltration Facilities</u>	<u>BMP Retention Volume², ac-ft</u>				
<u>Sub-regional Bioinfiltration Facilities</u>	<u>4.9</u>				
<u>Sub-regional Biofiltration Facility</u>	<u>0.1</u>				
<u>Regional Facility Total, ac-ft</u>	<u>5.0</u>				

2 - Volume below lowest surface discharge, ac-ft

Step 4: Compare Total Retention Volume to LID Performance Standard Retention Volume	
<u>Total Volume Reduction achieved, ac-ft</u>	<u>9.4</u>
<u>LID Performance Standard Retention Volume, ac-ft</u>	<u>9.2</u>
<u>Surplus Retention Volume Provided, ac-ft</u>	<u>0.2</u>

Los Angeles County LID Manual Requirements

Volume reductions provided by the Project's LID BMPs exceed the County LID Manual volume reduction requirements. A simple comparison of the volumetric retention requirements associated with the Project's LID Performance Standard and the County LID Manual's standard shows that the Project would achieve volume reductions exceeding those required by the County LID Manual. The project's LID BMPs are designed to fully retain the volume of stormwater runoff produced from a 0.75 inch storm event. The LID Manual requires that the excess volume (defined as the post-developed runoff volume minus the pre-developed runoff volume for the 0.75 inch storm event) be retained.

The Project LID Performance Standard allows impervious area up to 5 percent of the project area to be treated in media filters or equivalent where it is not feasible or practicable to implement infiltration, bioinfiltration, or biofiltration BMPs. The County LID Manual requires BMPs to be selected to infiltrate where feasible, but recognizes feasibility constraints that would limit infiltration. The result is that conformance with the Project LID Performance standard results in selection of BMPs that meet the BMP selection criteria of the County LID Manual and results in BMP sizes that are slightly larger than would be required to meet the sizing criteria of the County LID Manual.

Post-Development Modeled Surface Water Pollutants of Concern

Table 4.3-19, Predicted Average Annual Stormwater Runoff Volumes, shows the predicted changes in stormwater runoff mean annual volumes. As shown, mean annual runoff volumes are expected to increase ~~substantially~~ with development. The increase is the result of imperviousness associated with urbanization and the highly infiltrative nature of the soils in the tract map site's existing, agricultural condition. Project PDFs include site design, source control, and ~~treatment control~~ LID BMPs in compliance with the SUSMP requirements and the LID Performance Standard. Most of the site design PDFs, especially the minimization of impervious area and the provision of 71,359.6 acres of trails, parks, and vegetated slopes, open space, and water quality BMPs within the tract map project site, reduce the proposed development's increases in stormwater runoff volume. The ~~treatment control~~ LID BMPs provide ~~some~~ substantial runoff volume reduction via infiltration and ET and, therefore, provide hydromodification source control, as well as treatment control. ~~Based on BMP monitoring data in the International Stormwater BMP Database, a 25 percent reduction in~~ of stormwater. LID BMPs are designed to infiltrate or evapotranspire the runoff volume was conservatively assumed to occur in the vegetated swales and bioretention PDFs.²⁶ ~~Water quality basins were modeled with a 20 percent volume reduction from the 0.75 inch LID storm event, where feasible, in compliance with the LID Performance Standard.~~

**Table 4.3-19
Predicted Average Annual Stormwater Runoff Volumes**

Site Conditions	Average Annual Stormwater Runoff Volume (acre-ft)
Existing	<u>130</u> 183
Developed with PDFs	<u>334</u> 261
Change	<u>131</u> 148

Source: Geosyntec, 2008.

Total Suspended Solids. **Table 4.3-20, Predicted Average Annual TSS Concentration and Load**, shows the predicted average annual TSS concentration and loads. Conversion from agriculture to urban land-uses (with treatment) would reduce the average TSS concentration and loads in stormwater runoff from the project site.

²⁶ ~~Actual database information suggests that project treatment/hydromodification source control BMPs may provide greater than 30 percent average annual runoff volume reduction, but for purposes of this analysis, only a 20 to 25 percent volume reduction is anticipated.~~

**Table 4.3-20
Predicted Average Annual TSS Concentration and Load**

Site Conditions	Average Annual TSS Concentration (mg/L)	Average Annual TSS Load (tons/yr)
Existing	<u>192459</u>	<u>37444</u>
Developed with PDFs	<u>3337</u>	<u>1247</u>
Change	<u>-159422</u>	<u>-2597</u>

Source: Geosyntec, ~~2008~~2011.

The predicted average annual TSS concentration in stormwater runoff from the total modeled area with PDFs is compared to water quality criteria and the range of observed concentrations in the Santa Clara River in **Table 4.3-21, Comparison of Predicted TSS Concentrations with Water Quality Criteria and Observed Concentrations in Santa Clara River Reach 5**. Predicted TSS load and concentration declines with development and is at the low end of the range of observed concentrations in Santa Clara River Reach 5. Based on the comprehensive site design, the source control, LID and treatment control strategy, the predicted decrease in TSS anticipated after development, and comparison with available in-stream data and basin plan benchmark objectives, the TSS in stormwater runoff from the project would not cause a nuisance or adversely affect beneficial uses in the receiving waters and, thus, would not represent a significant impact to water quality.

**Table 4.3-21
Comparison of Predicted TSS Concentrations with Water Quality Criteria and Observed Concentrations in Santa Clara River Reach 5**

Predicted Average Annual TSS Concentration (mg/L)	Los Angeles Basin Plan Water Quality Objectives	California Toxics Rule Criteria	Range of Observed ¹ Concentrations in Santa Clara River Reach 5 (mg/L)
<u>3733</u>	Water shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses.	NA	32–6,591

Source: Geosyntec, ~~2008~~2011.

¹ Range of concentrations observed in the Santa Clara River during wet weather (Stations S29, NR1, and NR3).

NA = not applicable

Phosphorus. Table 4.3-22, **Predicted Average Annual Total Phosphorus Concentration and Annual Load**, shows the predicted average TP concentration and annual loads. The information presented in this table indicates that TP concentration and load also are predicted to decrease post-development. Because much of the total phosphorus load is associated with sediments, and the sediment load and concentrations are predicted to decrease with development, the TP concentration and annual TP load also are predicted to decrease.

Table 4.3-22
Predicted Average Annual Total Phosphorus Concentration and Annual Load

Site Conditions	Average Annual TP Concentration (mg/L)	Average Annual TP Load (lbs/yr)
Existing	1.514	548759
Developed with PDFs	0.3	193239
Change	-1.12	-355-520

Source: Geosyntec, ~~2008~~2011.

There are no numeric objectives for TP in the Los Angeles Basin Plan. A narrative objective for biostimulatory substances in the Los Angeles Basin Plan states: “waters shall not contain biostimulatory substances in concentrations that promote algal growth to the extent that such growth causes nuisance or adversely affects beneficial uses.” The low predicted TP concentrations in project stormwater discharges would not promote (*i.e.*, increase) algae growth, and therefore, comply with the narrative objective for biostimulatory substances in the Los Angeles County Basin Plan. As shown in **Table 4.3-23, Comparison of Predicted Total Phosphorus Concentration with Water Quality Criteria and Observed Concentrations in Santa Clara River Reach 5**, the predicted total phosphorus concentration is at the low end of the range of observed concentrations in Santa Clara River Reach 5. Based on the comprehensive site design, ~~the~~ source control, LID and treatment control strategy, the predicted decrease in TP concentrations and loads anticipated after development, and the comparison with available in-stream monitoring data and Basin Plan benchmark objectives, potential impacts associated with total phosphorus are predicted to be less than significant.

**Table 4.3-23
Comparison of Predicted Total Phosphorus Concentration with Water Quality Criteria
and Observed Concentrations in Santa Clara River Reach 5**

Predicted Average Annual Total Phosphorus Concentration (mg/L)	Los Angeles Basin Plan Water Quality Objectives	California Toxics Rule Criteria	Range of Observed ¹ Concentrations in Santa Clara River Reaches 7E (mg/L)
0.3	Waters shall not contain biostimulatory substances in concentrations that promote algal growth to the extent that such growth causes nuisance or adversely affects beneficial uses	NA	0.18–13.4

Source: Geosyntec, ~~2008~~2011.

¹ Range of concentrations observed in the Santa Clara River during wet weather (Stations S29, NR1, and NR3).

NA – not applicable

Nitrate-Nitrogen + Nitrite-Nitrogen and Ammonia. The predicted average nitrate-nitrogen plus nitrite-nitrogen, ammonia, and total nitrogen concentrations and annual loads are summarized in **Table 4.3-24, Predicted Average Annual Nitrate-N + Nitrite-N Concentration and Load; Table 4.3-25, Predicted Average Annual Ammonia-N Concentration and Load; and Table 4.3-26, Predicted Average Annual Total Nitrogen Concentration and Load**, respectively. As shown, average concentrations and loads of nitrate-nitrogen plus nitrite-nitrogen, ammonia-nitrogen, and total nitrogen are predicted to decrease. The decrease in nitrogen loads and concentrations can be attributed to higher nitrite-, nitrate- and ammonia-nitrogen EMCs observed in monitoring data from agricultural land uses versus urbanized land uses, along with nitrogen reductions that would be achieved in the treatment control PDFs.

**Table 4.3-24
Predicted Average Annual Nitrate-N + Nitrite-N Concentration and Load**

Site Conditions	Average Annual NO ₃ -N+NO ₂ -N Concentration (mg/L)	Average Annual NO ₃ -N+NO ₂ -N Load (lbs/yr)
Existing	3.06 3	1,2193,107
Developed with PDFs	1.00 5	409420
Change	-2.0 -5.8	-810 -2,687

Source: Geosyntec, ~~2008~~2011.

**Table 4.3-25
Predicted Average Annual Ammonia-N Concentration and Load**

Site Conditions	Average Annual NH3 Concentration (mg/L)	Average Annual NH3 Load (lbs/yr)
Existing	<u>0.61-0</u>	<u>215473</u>
Developed with PDFs	<u>0.20-2</u>	<u>147145</u>
Change	<u>-0.4-0.8</u>	<u>-68-328</u>

Source: Geosyntec, ~~2011~~2008.

**Table 4.3-26
Predicted Average Annual Total Nitrogen Concentration and Load**

Site Conditions	Average Annual Total Nitrogen Concentration (mg/L)	Average Annual Total Nitrogen Load (lbs/yr)
Existing	<u>5.640</u>	<u>2,1375,150</u>
Developed with PDFs	<u>3.049</u>	<u>1,2771,703</u>
Change	<u>-2.6-8.1</u>	<u>-860-3,447</u>

Source: Geosyntec, ~~2008~~2011.

Predicted nitrogen compound concentrations are compared to Basin Plan objectives and observed concentrations in **Table 4.3-27, Comparison of Predicted Nitrogen Compound Concentrations with Water Quality Criteria and Observed Concentrations in Santa Clara River Reach 5**. Average annual stormwater concentration of ammonia is predicted to be considerably less than the wasteload allocation for Santa Clara River Reach 5 and the Basin Plan objective, and within the low end of the range of observed concentrations. Likewise, the average annual stormwater concentration of nitrate-N plus nitrite-N is predicted to be considerably less than the TMDL wasteload allocation or the Basin Plan water quality objective, and within the range of observed concentrations for this reach of the Santa Clara River.

There are no numeric objectives for total nitrogen in the Basin Plan. A narrative objective for biostimulatory substances in the Basin Plan states: "waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses." The low predicted total nitrogen concentrations in project stormwater discharges would not promote (*i.e.*, increase) aquatic growth and, therefore, comply with the narrative objective for biostimulatory substances in the Basin Plan. As shown in **Table 4.3-27**, the predicted total nitrogen concentration is within the range of observed concentrations in Santa Clara River Reach 5.

Table 4.3-27
Comparison of Predicted Nitrogen Compound Concentrations with Water Quality Criteria
and Observed Concentrations in Santa Clara River Reach 5

Nutrient	Predicted Average Annual Concentration (mg/L)	Los Angeles Basin Plan Water Quality Objectives ¹ (mg/L)	TMDL Wasteload Allocation for Santa Clara River Reach 5 (mg/L)	Range of Observed ² Concentrations in Santa Clara River Reach 5 (mg/L)
Nitrate-N + Nitrite-N	1.00 0.5	5.0	6.8 ³	0.5–4.8
Ammonia-N	0.20 0.2	2.2 ⁴	1.75 ⁵	<0.005–1.1
Total Nitrogen	3.01 0.9	Waters shall not contain bio-stimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.	NA	<0.04–46 ⁶

Source: Geosyntec, ~~2008~~ 2011.

¹ There are no CTR criteria for nitrogen compounds.

² Range of concentrations observed in the Santa Clara River during wet weather (Stations S29, NR1, and NR3).

³ 30-day average concentration.

⁴ 4-day average concentration, ELS present, 90th percentile pH and temperature pairing observed at USGS Monitoring Station 11108500.

⁵ 30-day average in Reach 5 below Valencia.

⁶ Observed values for TKN (ammonia plus organic nitrogen).

Based on the comprehensive site design, ~~the~~ source control, LID and treatment control strategy, anticipated reductions in nitrate- plus nitrite-N, ammonia-N, and total nitrogen, and the comparison with available in-stream monitoring data, benchmark Basin Plan objectives and wasteload allocations, potential impacts associated with nitrogen compounds are predicted to be less than significant.

Metals. Projected loads and concentrations for the trace metals copper, lead, zinc, and total aluminum are presented in **Tables 4.3-28** through **4.3-32**. Except for aluminum and lead, the projections are for the dissolved form of the metal, as it is the dissolved form to which the CTR criteria applies. Due to consistently low concentrations of dissolved lead in the available stormwater runoff data, it was not possible to develop reliable EMC parameters for most land uses for modeling the dissolved fraction of lead. This constituent was therefore modeled as the total recoverable metal. Copper, lead, and zinc are the most prevalent metals typically found in urban runoff. Other trace metals, such as cadmium, chromium,

and mercury, typically are not detected in urban runoff or are detected at very low levels. (LACDPW, 2000. Los Angeles County 1994–2000 Integrated Receiving Water Impacts Report.)

The ~~data-model estimates~~ indicates that post-development dissolved copper, total lead, and dissolved zinc loads and concentrations and total aluminum concentrations are projected to decrease, when compared to pre-development conditions. These results can be explained by the difference in EMC values observed in representative monitoring data from the pre-developed agriculture and open space condition and the post-developed urban condition. Total aluminum loads are also predicted to increase/decrease.

Project PDFs include site design, source control, LID, and treatment control BMPs, in compliance with the SUSMP requirements. Specific site design PDFs that would be implemented to minimize increases in trace metals include directing drainage from impervious areas to vegetated areas, and the selection of building material for roof gutters and downspouts that do not include copper or zinc. Source control PDFs that target metals include education of property owners, BMP maintenance, and street sweeping of private streets and parking lots. The ~~treatment control-LID~~ BMPs also would reduce trace metals in the runoff from the proposed development. ~~Only the effects of the treatment control PDFs are reflected in the model results; effects of site design and treatment control BMPs are not modeled.~~

Table 4.3-28
Predicted Average Annual Dissolved Copper Concentration and Load

Site Conditions	Average Annual Dis. Cu Concentration (µg/L)	Average Annual Dis. Cu Load (lbs/yr)
Existing	<u>2826</u>	<u>1013</u>
Developed with PDFs	<u>109.9</u>	<u>88.9</u>
Change	<u>-18-16.1</u>	<u>-2-4.1</u>

Source: Geosyntec, ~~2008~~2011.

**Table 4.3-29
Predicted Average Total Lead Concentration and Annual Load**

Site Conditions	Average Annual Total Pb Concentration (µg/L)	Average Annual Total Pb Load (lbs/yr)
Existing	<u>12.216</u>	<u>4.58-0</u>
Developed with PDFs	<u>4.15-2</u>	<u>3.04-7</u>
Change	<u>-8.1-10.8</u>	<u>-1.5-3.3</u>

Source: Geosyntec, ~~2008~~2011.

**Table 4.3-30
Predicted Average Annual Dissolved Zinc Concentration and Load**

Site Conditions	Average Annual Dis. Zn Concentration (µg/L)	Average Annual Dis. Zn Load (lbs/yr)
Existing	<u>184132</u>	<u>6366</u>
Developed with PDFs	<u>6060</u>	<u>4554</u>
Change	<u>-124-72</u>	<u>-18-12</u>

Source: Geosyntec, ~~2008~~2011.

**Table 4.3-31
Predicted Average Annual Total Aluminum Concentration and Load**

Site Conditions	Average Annual Total Aluminum Concentration (µg/L)	Average Annual Total Aluminum Load (lbs/yr)
Existing	<u>1,282,634</u>	<u>487,313</u>
Developed with PDFs	<u>323,480</u>	<u>231,432</u>
Change	<u>-959-154</u>	<u>-256-119</u>

Source: Geosyntec, ~~2008~~2011.

A narrative objective for toxic substances in the Basin Plan states: "all waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life."

The CTR criteria are the applicable water quality objectives for protection of aquatic life. The CTR criteria are expressed for acute and chronic (4-day average) conditions; however, only acute conditions were

considered to be applicable for stormwater discharges because the duration of stormwater discharge is consistently less than 4 days. The CTR criteria are calculated on the basis of the hardness of the receiving waters. Lower hardness concentrations result in lower, more stringent CTR criteria. The minimum hardness value (250 mg/L as CaCO₃) observed in the Santa Clara River at the USGS Station 11108500 during wet weather was used as a conservative estimate; the mean observed hardness value was 660 mg/L as CaCO₃.

Comparison of the predicted runoff metal concentrations and the acute CTR criteria for dissolved copper, total lead, and dissolved zinc and the NAWQC criterion for aluminum are shown in **Table 4.3-32**, along with the range of observed concentrations in Santa Clara River Reach 5. The comparison of the post-developed with PDFs condition to the benchmark CTR and NAWQC values shows that all of the trace metal concentrations are below the benchmark water quality criteria. While dissolved zinc concentrations are predicted to be higher than the concentration observed in the Santa Clara River, dissolved copper, total lead, and aluminum concentrations are predicted to be within the range of observed values. Despite the predicted dissolved zinc concentrations being greater than the range of observed concentrations, project runoff is not expected to affect the concentration of dissolved zinc in the Santa Clara River, as the load of dissolved zinc is predicted to decrease with the proposed project while runoff volumes are predicted to increase. This would tend to result in a reduction of in-stream dissolved zinc concentration as a result of the Project. ~~Predicted trace metal concentrations are within or slightly above the range of observed concentrations.~~

For aluminum, the NAWQC acute criterion (750 µg/L for a pH range of 6.5 to 9.0) was used as a benchmark, as the CTR does not include aluminum. Although the NAWQC criterion is in the form of acid soluble aluminum (US EPA, 1988), the available monitoring data are for either dissolved aluminum or total aluminum. (US EPA, 1988. Ambient Water Quality Criteria for Aluminum – 1988. EPA 440/5-86-008. August 1988). Acid soluble aluminum, which is operationally defined as the aluminum that passes through a 0.45 µm membrane filter after the sample has been acidified to a pH between 1.5 and 2.0 with nitric acid, represents the forms of aluminum toxic to aquatic life or that can be readily converted to toxic forms under natural conditions. The acid soluble measurement does not measure forms of aluminum, such as aluminum that is occluded in minerals or clays, or strongly sorbed to particulate matter, that are not toxic and are not likely to become toxic under natural conditions. Acid soluble aluminum data is not available because this form of aluminum is not typically measured. Nevertheless, total aluminum has been used in this analysis and compared with the NAWQC in order to be conservative.

**Table 4.3-32
Comparison of Predicted Trace Metal Concentrations with Water Quality Criteria and Observed Concentrations in Santa Clara River Reach 5**

Metal	Predicted Average Annual Concentration (µg/L)	California Toxics Rule Criteria¹ (µg/L)	Range of Observed² Concentrations in Santa Clara River Reach 5 (µg/L)
Dissolved Copper (µg/L)	<u>109.1</u>	32	3.3–22.6
Total Lead (µg/L)	<u>44.9</u>	260	0.6–40
Dissolved Zinc (µg/L)	<u>6056</u>	250	3–37
Total Aluminum	<u>323480</u>	750	131–19,650

Source: Geosyntec, 20082011.

¹ Hardness = 250 mg/L, based on minimum observed value at USGS Station 11108500. A lead criterion is for total recoverable lead. NAWQC aluminum criteria for pH 6.5 – 9.0.

² Range of concentrations observed in the Santa Clara River during wet weather (Stations S29, NR1, and NR3).

Based on the comprehensive site design, the source control, LID and treatment strategy, predicted decrease in concentrations of all metals of concern and in loads of all metals of concern (except for total aluminum), and the comparison with the instream water quality monitoring data and benchmark water quality criteria and the available information regarding aluminum toxicology, the project would not have significant impacts resulting from trace metals.

Chloride. Table 4.3-33, **Predicted Average Annual Chloride Concentration and Load**, shows the predicted average annual chloride concentration and load. Due to the conversion from agricultural to urban land uses, and the associated EMCs, annual chloride concentration is predicted to decrease when compared to the existing conditions, although the average annual chloride load is predicted to increase slightly due to increased runoff volume.

**Table 4.3-33
Predicted Average Annual Chloride Concentration and Load**

Site Conditions	Average Annual Cl Concentration (mg/L)	Average Annual Cl Load (lbs/yr)
Existing	<u>2420</u>	<u>7,4406.0</u>
Developed with PDFs	<u>1414</u>	<u>10,3606.2</u>
Change	<u>-6-10</u>	<u>2,9200.2</u>

Source: Geosyntec, 20082011.

The predicted chloride concentration in post-development project runoff is compared to the Los Angeles Basin Plan water quality objective and the range of observed concentrations in Santa Clara River Reach 5 in **Table 4.3-34, Comparison of Predicted Chloride Concentrations with Water Quality Objective, TMDL, and Observed Concentrations in Santa Clara River Reach 5**. This data indicates that the predicted average annual chloride concentration in stormwater runoff from the project area is within the low range of observed concentrations for this pollutant and is well below the Santa Clara River Reach 5 Basin Plan water quality objective and the TMDL wasteload allocation for Santa Clara River Reach 5 (100 mg/L for both). Based on the comprehensive site design, source control, LID, and treatment control strategy, predicted decrease in chloride concentration, and comparison with benchmark receiving water criteria, the project would not have significant water quality impacts resulting from chloride.

Table 4.3-34
Comparison of Predicted Chloride Concentrations with Water Quality Objective,
TMDL, and Observed Concentrations in Santa Clara River Reach 5

Pollutant	Predicted Average Annual Concentration (mg/L)	Santa Clara River Reach 5 TMDL Wasteload Allocation and Basin Plan Water Quality Objective ¹ (mg/L)	Range of Observed ² Concentrations in Santa Clara River Reach 5 (mg/L)
Chloride	14	100	3–121

Source: Geosyntec, 2008.

¹ There are no CTR criteria for chloride. This is the Basin Plan objective for Santa Clara River Reach 5.

² Range of concentrations observed in the Santa Clara River during wet weather (Stations S29, NR1, and NR3).

(c) Post-Development Surface Water Pollutants Addressed Without Modeling

Turbidity. Turbidity is a measure of suspended matter that interferes with the passage of light through the water, or in which visual depth is restricted. (Sawyer *et al.*, 1994. Chemistry for Environmental Engineering, Fourth Edition. Clair Sawyer, Perry McCarty, and Gene Parkin. McGraw-Hill, Inc., 1994.) Turbidity may be caused by a wide variety of suspended materials, which range in size from colloidal to coarse dispersions, depending upon the degree of turbulence. In lakes or other waters existing under relatively quiescent conditions, most of the turbidity will be due to colloidal and extremely fine dispersions. In rivers under flood conditions, most of the turbidity will be due to relatively coarse dispersions. Erosion of clay and silt soils may contribute to in-stream turbidity. Organic materials reaching rivers serve as food for bacteria, and the resulting bacterial growth and other microorganisms that feed upon the bacteria produce additional turbidity. Nutrients in runoff may stimulate the growth of algae, which also contributes to turbidity.

Discharges of turbid runoff primarily are of concern during the construction phase of development. The Construction SWPPP must contain sediment and erosion control BMPs pursuant to the Construction General Permit, and those BMPs must effectively control erosion and discharge of sediment, along with other pollutants, per the BAT/BCT standards. Additionally, fertilizer control, non-visible pollutant monitoring, and trash control BMPs in the SWPPP would combine to help control turbidity during the construction phase. (See **Subsection 4.3.7.c**, above.)

In the post-development condition, placement of impervious surfaces would serve to stabilize soils and to reduce the amount of erosion that may occur from the project area during storm events, and would therefore decrease turbidity in the runoff from the project. Project PDFs, including source controls (such as, common area landscape management and common area litter control) and ~~treatment control~~ LID BMPs in compliance with the SUSMP requirements and the LID Performance Standard, would prevent or reduce the release of organic materials and nutrients (which might contribute to algal blooms) to receiving waters. As shown earlier in this section, post-development nutrients in runoff are not expected to cause significant water quality impacts. Based on implementation of the project PDFs and the construction-related controls, runoff discharges from the project would not cause increases in turbidity; therefore, the water quality impacts of the project on turbidity are considered less than significant.

Pathogens.

Pathogens are viruses, bacteria, and protozoa that can cause gastrointestinal and other illnesses in humans through body contact exposure. Identifying pathogens in water is difficult as the number of pathogens is fairly small, requiring sampling and filtering of large volumes of water to obtain a reliable result. Traditionally, regulators have used fecal indicator bacteria (FIB), such as total and fecal coliform, enterococci, and *E. coli*, as indirect measures of the presence of pathogens and by association, human illness risk. Early epidemiological studies (i.e., studies that investigate human illness occurrence versus environmental factors such as water quality) that linked swimming-associated gastrointestinal symptoms to *E. coli* or enterococci in swimming waters for sewage-dominated receiving waters led to the development of the current recreational water quality criteria (EPA, 1986). In contrast to receiving waters subject to sanitary discharges, only a few epidemiological studies have evaluated the health effects of exposure to water bodies subject to discharges from storm drains and these studies focused on the effects of dry weather urban flows on recreational exposure (e.g., Haile et al, 1999 and Colford et al, 2005).

Santa Clara River Bacteria TMDL

The LARWQCB approved a Basin Plan amendment on July 8, 2010, to incorporate a TMDL for Indicator Bacteria for the Santa Clara River Estuary and Reaches 3, 5, 6, and 7 of the Santa Clara River (Resolution #R10-006). The TMDL provides allowable exceedance day-based WLAs for MS4 dischargers for *E. coli* in Reaches 3, 5, 6, and 7, and for Fecal coliform, Enterococcus, and Total Coliform in the Santa Clara River Estuary. These WLAs are anticipated to be incorporated into the Los Angeles County MS4 Permit once the interim and final WLAs become effective, at which point they will become an enforceable permit provision.

The TMDL WLAs applicable to Reach 5 of the Santa Clara River are listed in **Table 4.3-3**. The Indicator Bacteria TMDL MS4 WLAs are applied in the form of allowable exceedance days. The TMDL implementation schedule deadlines applicable to Reach 5 are summarized in **Table 4.3-34a**.

The Regional Board indicated in the TMDL implementation schedule that the Regional Board will reconsider the TMDL if, prior to four years after the effective date of the TMDL, one of the following occurs:

- (1) Monitoring or any voluntary local reference system studies justify a revision, or
- (2) U.S. EPA publishes revised recommended bacteria criteria (expected in December 2012), or
- (3) The Regional Board adopts a separate Basin Plan amendment, suspending recreational uses in the Santa Clara River during high flows.

Table 4.3-34a
Indicator Bacteria TMDL Implementation Schedule and Tasks

<u>Deadline</u>	<u>Task</u>
<u>1 year after effective date of TMDL</u>	<u>Jurisdictions and agencies responsible for the MS4 WLAs must submit an in-stream bacteria water quality monitoring plan for the SCR watershed. The monitoring plan must be approved by the Executive Officer.</u>
<u>6 months after monitoring plan approval by Executive Officer</u>	<u>Monitoring of SCR Watershed must begin.</u>
<u>3 years after effective date of TMDL</u>	<u>Jurisdictions and agencies must submit a draft Implementation Plan outlining how to achieve compliance with the WLAs.</u>
<u>4 years after effective date of TMDL</u>	<u>Interim MS4 WLAs apply.</u>
<u>6 months after receipt of Regional Board comments on draft Implementation Plan</u>	<u>Jurisdictions and agencies must submit a final Implementation Plan and begin additional outfall monitoring.</u>
<u>11 years after effective date of TMDL</u>	<u>SCR Reaches 3, 5, 6, and 7 must achieve compliance with final WLAs for geometric mean objectives and allowable exceedance days for single sample objectives for dry weather.</u>
<u>17 years after effective date of TMDL</u>	<u>SCR Reaches 3, 5, 6, and 7 must achieve compliance with final WLAs for geometric mean objectives and allowable exceedance days for single sample objectives for wet weather.</u>

There are various confounding factors that affect the reliability of FIB as pathogen indicators. One primary factor is that there are numerous natural or non-anthropogenic (or “zoonotic”) sources of FIB in developed watersheds and their receiving water bodies, including birds and other wildlife, soils, and plant matter. Anthropogenic sources may include domesticated animals and pets, poorly functioning septic systems, sewer system overflows or spills, cross-connections between sewer and storm drains, and the utilization of outdoor areas or storm drains for human waste disposal by people without access to indoor sanitary facilities. All of these sources can contribute to the concentrations of FIB, but not all the sources may pose a comparable human health risk (EPA, 2009).

A second confounding factor is that FIB can multiply in the field if the substrate, temperature, moisture, and nutrient conditions are suitable (MEC, 2004). This is one potential reason that FIB concentrations do not always correlate with pathogens. For example, in a field study conducted by Schroeder et al., pathogens (in the form of viruses, bacteria, or protozoa) were found to occur in 12 of 97 soil samples taken, but the samples that contained pathogens did not correlate with the samples containing concentrations of FIB. (Schroeder et al. 2002. Management of Pathogens Associated with Storm Drain Discharge, Center for Environmental and Water Resources Engineering, Dept. of Civil and Environmental Engineering, University of California, Davis prepared for Division of Environmental Analysis, California Department of Transportation, May). Numerous other researchers have reported that bacteria presence and even regrowth was observed in various substrates such as beach sands, wrack line (accumulation of kelp in the inter-tidal area of beaches), inter/sub-tidal sediments, and material deposited in storm drains

(MEC, 2004). FIB monitoring in the Santa Ana River indicate that the ubiquity of sources and potential regrowth far exceed the human sources of fecal bacteria generated by the entire population in the watershed (Surbeck et al, 2008). Regrowth of bacteria downstream of a package treatment plant utilizing ultraviolet (UV) radiation to disinfect dry weather flows in Aliso Creek was considered a prime factor in the rapid rebound of FIB concentrations downstream of the plant (Andersen, 2005). Recent research also implicates storm drain biofilms as another urban source of FIB to receiving waters (Roberts and Kolb, 2009; Skinner et al, 2010)

A third confounding factor is that the persistence of FIB may differ from those of various pathogenic viruses, bacteria, protozoa. Viruses, for instance, are small, low in number, and difficult to inactivate, while protozoa may form protective cysts that are resistant to destruction and render them dormant but capable of reactivating in the future. Therefore, while some indicator bacteria may die off in the water column due to ultraviolet disinfection or other unfavorable environmental conditions (including predation and antagonism), pathogens occasionally may persist longer (Haile et. al., 1999). So while the previously two described factors may result in indicator bacteria resulting in false positive indications of public health risk, there may also be instances when indicator bacteria result in false negative indications.

Given the concern about the adequacy of the current recreational water quality criteria, the U.S. EPA is undergoing a comprehensive evaluation and revision of their current FIB-based recreational water quality criteria, with completion scheduled for December 2012. To help initiate this effort, U.S. EPA gathered 43 experts to identify research priorities needed to refine the existing criteria and transition to new methods (U.S. EPA, 2007b). The experts identified seven topics for research, including “scientifically defensible for applications in a wide variety of geographical locations and water types” and “protective of individuals exposed to recreational waters impacted by all sorts of pathogen sources including animal feces, stormwater, and sewage” (Boehm et al, 2009).

In a similar effort focused on inland waters, the Water Environment Research Federation (WERF) convened an expert panel to recommend a research program that would also support U.S. EPA’s intended revision of the water quality criteria (WERF, 2009). These various research efforts are ongoing and the U.S. EPA will consider all submitted data as part of their recreational water quality criteria revision process.

Until recently, few epidemiological studies have tested the health effects of exposure to the receiving waters of direct and recent stormwater runoff, and these studies have found it difficult to link illness with stormwater sources. For instance, the Mission Bay epidemiological study (Colford et al., 2005) found that “only skin rash and diarrhea were consistently elevated in swimmers versus non swimmers, the risk of illness was uncorrelated with levels of traditional water quality indicators, and state water quality thresholds were not predictive of swimming-related illnesses.” Various other researchers, as part of U.S. EPA’s pathogen research program, are now conducting epidemiological studies nationwide at fresh and

salt water beaches that receive wastewater and/or stormwater discharges. In southern California, the SCCWRP has been conducting a multi-year study of public health risks at marine beaches, with a final report that is scheduled for late 2011. Until these various studies are completed, however, there is no reliable documentation of the health effects caused by exposure to stormwater based on epidemiological studies.

Dry weather, non-storm stream flows from undeveloped watersheds tend to have lower concentrations of FIB than dry weather urban flows, although water quality standard exceedances still occur. For instance, a recent study by SCCWRP which monitored 15 unimpaired natural Southern California streams weekly during dry weather for a year showed that about 18 percent of the samples exceeded daily and monthly bacterial indicator thresholds, although concentrations from these unimpaired streams were one to two orders of magnitude lower than levels found in developed watersheds (Tiefenthaler, et al., 2009). The study reported an average of the geometric means for *E. coli* in dry weather flows in each stream of 41 MPN/100 mL. In comparison, the Basin Plan objective Santa Clara River Bacteria TMDL numeric target is 235 MPN/100 mL for any single sample and 126 MPN/100 mL for the geometric mean *E. coli* density shall not exceed 126 MPN/100 mL. The Santa Clara River bacteria TMDL WLAs are based on this and other SCCWRP reference stream and reference beach datasets, in acknowledgement of natural sources.

During wet weather, stormwater runoff can mobilize indicator bacteria from a number of watershed and in-stream sources, and, therefore, indicator bacteria concentrations tend to increase. For example, median stormwater runoff monitoring results for the open space land use category, as summarized by Stein et. al. (2007), include *E. coli* concentrations of about 5,400 MPN/100 mL from the 2001–2005 Los Angeles River Watershed Wet Weather Study, and 7,200 MPN/100 mL from the National Stormwater Quality Database (Pitt et al., 2003). Similarly, median open space land use stormwater runoff monitoring results include *E. coli* concentrations of 5,400 MPN/100 mL from the Stein et al. (2007) study based on two flow-weighted average results, and 500 MPN/100 mL for fecal coliform from a 1994–2000 Los Angeles County (2000) study based on 21 grab samples. The Santa Clara River Bacteria TMDL has incorporated allowable exceedance days to account for the fact that recreational criteria, strictly applied, are frequently exceeded even at natural, undeveloped streams and beaches. The interim and final allowable exceedance days for Reach 5 of the Santa Clara River for wet and dry weather are listed in **Table 4.3-3**.

Land use type and condition also affect runoff concentrations, and most studies show higher FIB concentrations in urban runoff than in open space runoff. Runoff from residential land uses from the Los Angeles River Watershed Wet Weather Study had a median *E. coli* concentration of about 6,300 MPN/100 mL and about 8,300 MPN/100 mL from the National Stormwater Quality Database (Stein et. al, 2007). The median value of four flow-weighted average results from the Stein et. al. (2007) study was about 6,100 MPN/100mL for *E. coli* for the low density residential land use site. These data represent urban areas that in general do not have source and treatment controls, and therefore are not indicative of runoff from the proposed project.

Runoff from agricultural watersheds involving horticulture and row cropping is known to similarly contain relatively high concentrations of FIB. Data from a stormwater drain serving an agricultural watershed with predominantly row crops in Ventura County showed median fecal coliform levels (approximately 7,000 MPN/100 mL) similar to that found for general urban runoff. Agricultural land and open space areas likely share some of the same wildlife sources, but livestock may be present as well. These data indicate that wildlife, livestock, plants, and/or soils can be a very important source of pathogens and/or FIB such as fecal coliform.

The primary sources of pathogen indicators from Landmark Village would likely be sediment, pet wastes, wildlife, and regrowth in the storm drain itself. Other sources of pathogens and pathogen indicators, such as cross connections between sanitary and storm sewers, are unlikely given modern sanitary sewer installation methods and inspection and maintenance practices.

The levels of bacteria in runoff from the proposed project would be reduced by source controls and treatment controls. The most effective means of controlling specific bacteria sources, such as pet wastes and other animal wastes is through source control, specifically education of pet owners, education regarding feeding of waterfowl near water bodies, and providing products and disposal containers that encourage and facilitate cleaning up after pets, and storm drain cleaning practices.

Although, there are limited data on the effectiveness of different types of stormwater treatment to manage pathogen indicators, treatment processes that help reduce pathogen indicators include sunlight (ultraviolet light) degradation, sedimentation, and filtration.

Bioretention, a LID stormwater treatment BMP which provides filtration through amended soils, is an example of an effective BMP for addressing FIB. The City of Austin, Texas conducted a number of studies on the effectiveness of sedimentation/filtration treatment systems for treating stormwater runoff. Most of the structures were designed to treat 0.5 inch of runoff. Data from four sand filters indicated a range of removals from 37 percent to 83 percent for fecal coliform, and 25 percent to 81 percent for fecal streptococci. Research on the use of filtration to remove bacteria also has been conducted in Florida by the Southwest Florida Water Management District. Significant reductions in total and fecal coliform bacteria and the other indicators were observed between inflow and outflow samples for sand filtration. Percent reductions were measured using flow-weighted sampling techniques. Total coliform bacteria removals were less than 70 percent, and fecal coliform bacteria reduction varied from 65 percent to 100 percent.

Similarly, where soil conditions are conducive to infiltration, LID practices and stormwater treatment facilities that allow for infiltration can reduce runoff volume and treat FIB by infiltration, which in turn reduces FIB loads. In a literature summary, the U.S. EPA reported typical pathogen removal for infiltration basins and trenches as 65 to 100 percent. (U.S. EPA, 1993. Office of Water. Guidance to Specify Management Measures for Sources of Nonpoint Pollution in Coastal Waters. EPA-840-B-920002.

Washington, DC.) These types of BMPs are specified for incorporation into the Project where feasible to meet the LID design standards specified in Section 5 of this report, which are based on achieving equivalent pollutant control and hydrologic control as specified by the Project LID Performance Standard, the LID Ordinance and Manual, and in the MS4 Permit/SUSMP Manual requirements for treatment of volume or flow of stormwater.

In summary, stormwater discharges from the project could potentially exceed the REC-1 Basin Plan standard for FIB; therefore, impacts from FIB may be significant prior to mitigation. However, the FIB concentrations in runoff from the project would be reduced through the implementation of source and LID BMPPDFs. The project would incorporate a number of source controls specific to managing FIB, including education of pet owners, education regarding feeding of waterfowl near water bodies, and providing products and disposal containers that encourage and facilitate cleaning up after pets. The project would not include septic systems and the sewer system would be designed to current standards, which minimizes the potential for leaks. The proposed project development, consistent with the MS4 Permit requirements, includes a comprehensive set of site design, source control, LID, and treatment control BMPs selected to manage pollutants of concern, including pathogen indicators. Furthermore, the project will comply with all future MS4 Permit provisions incorporating the TMDL wasteload allocations and implementation plan. With these BMPs, the project would not result in substantial changes in pathogen or FIB concentrations in receiving waters, causing a violation of the water quality standards or waste discharge requirements or otherwise substantially degrade water quality in the receiving waters. Water quality impacts related to pathogens would be reduced to a level less than significant.

~~Pathogens are viruses, bacteria, and protozoa that can cause illness in humans. Identifying pathogens in water is difficult as the number of pathogens is exceedingly small, thereby requiring the sampling and filtering of large volumes of water. Traditionally, water managers have relied on measuring "pathogen indicators," such as total and fecal coliform, as an indirect measure of the presence of pathogens. Although such indicators were considered reliable for sewage samples, indicator organisms are not necessarily reliable indicators of viable pathogenic viruses, bacteria, or protozoa in stormwater because coliform bacteria, in addition to being found in the digestive systems of warm blooded animals, also are found in plants and soil. Certain pathogen indicators can multiply in the field if the substrate, temperature, moisture, and nutrient conditions are suitable. Paulsen and List summarize the debate over~~

the use of pathogenic indicators and point out that scientific studies show no correlation between fecal coliform densities and gastrointestinal illness in swimmers; therefore, coliform may not indicate a significant potential for causing human illness. (Paulsen, Susan and J. List, 2005. Review of Bacteria Data from Southern California Watersheds. Prepared by Flow Science for The Irvine Company. April 2005. Provided in Appendix D of the Water Quality Technical report in Recirculated Draft EIR **Appendix 4.3**.) In a recent field study conducted by Schroeder *et al.*, pathogens (in the form of viruses, bacteria, or protozoa) were found to occur in 12 of the 97 samples taken, but the samples that contained pathogens did not correlate with the concentrations of indicator organisms. (Schroeder et al. 2002. Management of Pathogens Associated with Storm Drain Discharge, Center for Environmental and Water Resources Engineering, Dept. of Civil and Environmental Engineering, University of California, Davis prepared for Division of Environmental Analysis, California Department of Transportation, May.) Most researchers who have correlated human illness to fecal indicator bacteria levels have conducted epidemiological studies in waters receiving point inputs of treated or raw sewage; few epidemiological studies have tested the health effects of exposure to water receiving direct and recent stormwater runoff. Thus, there is no explicit documentation of the health effects of stormwater based on epidemiological studies. (WERF, 2007. Development of a Protocol for Risk Assessment of Microorganisms in Separate Stormwater Systems. 03 SW 2. 2007.)

There are numerous sources of pathogen indicators, including birds and other wildlife, as well as domesticated animals and pets, soils, and plant matter. Anthropogenic sources may include poorly functioning septic systems, cross connections between sewer and storm drains, and the utilization of outdoor areas for human waste disposal by people without access to indoor sanitary facilities.

It is recognized that natural levels of bacteria are present in the project's receiving waters and that control of such natural sources is not required nor desired by regulatory agencies. For example, the RWQCB TMDL for bacteria in the Malibu Creek watershed makes provisions for background levels of bacteria associated with natural sources. (LARWQCB, 2004. Total Maximum Daily Loads for Bacteria Malibu Creek Watershed. January 29, 2004.) Bacteria TMDLs have not been developed for the Santa Clara River.

Data collected from undeveloped watersheds or watersheds, with little development, indicate that bacterial standards are often exceeded. For example, monitoring data obtained by Los Angeles County for vacant land use showed a mean fecal coliform concentration of 1,397 MPN/100 mL in 21 samples (compared to the REC1 water quality criteria of 400 MPN/100 mL). (LACDPW, 2000. Los Angeles County 1994 2000 Integrated Receiving Water Impacts Report.) The US EPA has recognized that routine exceedances of ambient water quality criteria due to natural sources of pollution do occur. In response, the US EPA has recommended changes to designated uses as the most appropriate way to address these situations. (Paulsen, Susan and J. List, 2005. Review of Bacteria Data from Southern California Watersheds. Prepared by Flow Science for The Irvin Company. April 2005.) The monitoring data

collected in the tributaries of the Santa Clara River showed a range of fecal coliform concentrations from 953 MPN/100 mL to greater than 81,200 MPN/100 mL (see **Tables 4.3-8** and **4.3-9**).

The US EPA has compiled an extensive database on stormwater data collected as part of its program to regulate stormwater. (Pitt, R., A. Maestre, and R. Morguecho, 2003. "The National Stormwater Quality Database," prepared by University of Alabama and Center for Watershed Protection.) These data were drawn from 65 programs in 17 states throughout the United States. The data indicate that median fecal concentrations range from about 4,500 to 7,700 MPN/100 mL for a range of commercial and residential land uses, compared to a median value of around 3,000 MPN/100 mL for open space and vacant land. These data represent urban areas that in general do not have source and treatment controls, and, therefore, are not indicative of runoff from Landmark Village.

Runoff from agricultural watersheds involving horticulture and row cropping is known to similarly contain relatively high levels of indicator bacteria. Data from a stormwater drain serving an agricultural watershed with predominantly row crops in Ventura County showed similar median fecal coliform levels (~7,000 MPN/100 mL) to that found for general urban runoff. Agricultural land and open space areas likely share some of the same wildlife sources, but livestock may be present as well. These data indicate that wildlife, livestock, plants, and/or soils can be a very important source of pathogens and/or pathogen indicators such as fecal coliform.

A study conducted by PBS&J in coastal watersheds near Laguna Beach in Orange County found that indicator bacteria concentrations in receiving waters downstream from the developed/urban watersheds were not significantly different than concentrations in receiving waters downstream from undeveloped watersheds. (PBS&J, 1999. Evaluation of Bacteriological Impacts to Runoff and Coastal Waters from the Crystal Cove Development.) Additional analysis conducted by Paulsen and List further supported these findings. (Paulsen, Susan and J. List, 2005. Review of Bacteria Data from Southern California Watersheds. Prepared by Flow Science for The Irvine Company. April 2005.) These studies suggest that the development proposed for Landmark Village would not result in appreciable changes in pathogen levels in the receiving waters when compared to the existing conditions.

The primary sources of fecal coliform from Landmark Village would likely be sediment, pet wastes, wildlife, and regrowth in the storm drain itself. Other sources of pathogens and pathogen indicators, such as cross connections between sanitary and storm sewers, are unlikely given modern sanitary sewer installation methods and inspection and maintenance practices.

The levels of bacteria in runoff from Landmark Village would be reduced by source controls and treatment controls. The most effective means of controlling pet wastes and wastes from human interaction with wildlife is through source control, specifically education of pet owners, education regarding feeding of waterfowl near water bodies, providing products and disposal containers that encourage and facilitate cleaning up after pets, and storm drain cleaning practices.

Although, there are limited data on the effectiveness of extended detention basins to treat pathogen indicators, the treatment processes known to be occurring in extended detention basins involve sunlight (ultraviolet light) degradation, sedimentation, and infiltration, all of which can reduce pathogen concentrations and loads. Many of the proposed detention basins are to be located on relatively infiltrative soils and pathogen removal by filtration is a common and effective practice in wastewater treatment. The Center for Watershed Protection maintains a National Pollutant Removal Performance Database that indicates that removal performance for pathogen indicators in various types of extended detention basins ranged between 70 to 80 percent. (CWP, 2000. National Pollutant Removal Performance Database.)

In addition to treatment by extended detention, bioretention areas and vegetated swales are proposed. Bioretention relies on filtration through an amended sand soil layer for water quality treatment, while vegetated swales provide sediment removal through settling and allow for infiltration of low flows. Again, filtration and infiltration are effective means of treating pathogen indicators. The city of Austin, Texas conducted a number of studies on the effectiveness of sedimentation/filtration treatment systems for treating stormwater runoff. Most of the structures were designed to treat one half inch of runoff. Data from four sand filters indicated a range of removals from 37 percent to 83 percent for fecal coliform, and 25 percent to 81 percent for fecal streptococci.

Research on the use of filtration to remove bacteria also has been conducted in Florida by the Southwest Florida Water Management District. (Significant reductions in total and fecal coliform bacteria and the other indicators were observed between inflow and outflow samples for sand filtration. Percent reductions were measured using flow weighted sampling techniques. Total coliform bacteria removals were less than 70 percent, and fecal coliform bacteria reduction varied from 65 percent to 100 percent. In a literature summary, the US EPA reported typical pathogen removal for infiltration basins and trenches as 65 to 100 percent. (US EPA, 1993. Office of Water. Guidance to Specify Management Measures for Sources of Nonpoint Pollution in Coastal Waters. EPA-840-B-920002. Washington, DC.)

In summary, stormwater discharges from the project could potentially exceed the REC 1 Basin Plan standard for fecal coliform; therefore, impacts from indicator bacteria may be significant prior to mitigation. However, although such fecal indicator bacteria were considered reliable for sewage samples, indicator organisms are not necessarily reliable indicators of viable pathogenic viruses, bacteria, or protozoa in stormwater because coliform bacteria, in addition to being found in the digestive systems of warm blooded animals, also are found in plants and soil. Potential post-development pathogen sources include natural sources, and it is recognized that natural levels of bacteria are present in the project's receiving waters and that control of such natural sources is neither required nor desired by regulatory agencies. Anthropogenic sources include leaking septic and sewer systems and pet wastes. The project would not include septic systems and the sewer system would be designed to current standards, which minimizes the potential for leaks. The proposed project development, consistent with the MS4 Permit requirements, includes a comprehensive set of source and treatment control BMPs selected to manage

pollutants of concern, including pathogens and pathogen indicators. With this series of BMPs, the project would not result in substantial changes in pathogen levels in the receiving waters compared to existing conditions, and potential water quality impacts related to pathogens are considered less than significant.

Hydrocarbons. Various forms of hydrocarbons (oil and grease) are common constituents associated with urban runoff; however, these constituents are difficult to measure. Typically, measurements are taken by grab samples, making it difficult to develop reliable EMCs for modeling. Based on this consideration, hydrocarbons were not modeled, but instead are addressed qualitatively.

Hydrocarbons are a broad class of compounds, most of which are non-toxic. Hydrocarbons are hydrophobic (low solubility in water), have the potential to volatilize, and most forms are biodegradable. A subset of hydrocarbons, PAHs can be toxic depending on the concentration levels, exposure history, and sensitivity of the receptor organisms. Of particular concern are those PAH compounds associated with transportation-related sources.

Although the concentration of hydrocarbons in runoff is expected to increase slightly under post-development project conditions, due to the increase in roadways, driveways, parking areas and vehicle use, the project PDFs are expected to prevent appreciable increases in hydrocarbon concentrations from leaving the project site. Source control PDFs that address petroleum hydrocarbons include educational materials on used oil programs; carpooling and public transportation alternatives to driving; BMP maintenance; and street sweeping private streets. Although vehicle emissions and leaks are the primary source of hydrocarbons in urban areas, it is anticipated that vehicles in the proposed development generally would be well maintained and newer models, which would help to limit emissions and leaks. Lastly, the parking lot site design, source controls, ~~treatment BMPs~~ and vegetation and soils within the ~~treatment control~~ LID PDFs would adsorb the low levels of emulsified oils in stormwater runoff, preventing discharge of hydrocarbons and visible film in the discharge or the coating of objects in the receiving water.

The majority of PAHs in stormwater adsorb to the organic carbon fraction of particulates in the runoff, including soot carbon generated from vehicle exhaust. For example, a stormwater runoff study found that the dissolved-phase PAHs represented less than 11 percent of the total concentration of PAHs. (Marslek, J., Watt, W.E., Anderson, B.C., and Jaskot, C., 1997. "Physical and Chemical Characteristics of Sediments from a Stormwater Management Pond." *Water Quality Research Journal of Canada*, 32(1), 89-100.) Consequently, the extended detention basins, bioretention areas, and vegetated swales proposed as PDFs, which are designed to treat pollutants through settling, filtration, and infiltration, would be effective in treating PAHs.

Los Angeles County conducted PAH analyses on 27 stormwater samples from a variety of land uses in the period 1994-2000. (Los Angeles County Department of Public Works, 2000. Los Angeles County 1994-2000 Integrated Receiving Water Impacts Report.) For those land uses where sufficient samples were taken and were above detection levels to estimate statistics, the mean concentrations of individual PAH

for water quality. Although pyrethroids tend to be toxic to *Ceriodaphnia dubia* test organisms at concentrations in water comparable to diazinon, pyrethroids do not dissolve well in water but instead adhere well to surfaces, including particles in the environment. At equilibrium, pyrethroid concentrations in sediment are reported to be about 3,000 times greater than dissolved concentrations in water. Thus, BMPs targeting reductions and removal of sediment loads would be effective to reduce and remove pyrethroids as well.

Source control measures, such as education programs for owners, occupants, and employees on the proper application, storage, and disposal of pesticides, are the most promising strategies for controlling the pesticides that would be used post-development. Structural treatment controls are less practical because of the variety of pesticides and wide range of chemical properties that affect the ability to treat these compounds. However, most pesticides, including historical pesticides that may be present at the site, are relatively insoluble in water and therefore tend to adsorb to the surfaces of sediment, which would be settled or filtered out of the water column in the ~~water quality treatment~~ LID BMP PDFs. In addition, biofiltration media contains sorption sites that would promote the removal of pesticides. Thus, treatment in the ~~bioretention, vegetated swales, and extended detention basin~~ LID BMPs should achieve some removal of pesticides from stormwater as TSS is reduced and stormwater water is biofiltered.

For common area landscaping in commercial areas, multi-family residential areas and parks, an IPM Program will be incorporated. The goal of an IPM is to keep pest levels at or below threshold levels, reducing risk and damage from pest presence, while eliminating the risk from the pest control methods used. IPM programs achieve these goals through the use of low risk management options by emphasizing use of natural biological methods and the appropriate use of selective pesticides. IPM programs also incorporate environmental consideration by implementing procedures that minimize intrusion and alteration of biodiversity in ecosystems.

While pesticides are subject to degradation, they vary in how long they maintain their ability to eradicate pests. Some break down almost immediately into nontoxic byproducts, while others can remain active for longer periods of time. While pesticides that degrade rapidly are less likely to adversely affect non-targeted organisms, in some instances it may be more advantageous to apply longer-lasting pesticides if it results in fewer applications or smaller amounts of pesticide use. As part of the IPM program, careful consideration would be made as to the appropriate type of pesticides for use on the project site. While pesticide use is likely to occur due to maintenance of landscaped areas, particularly in the residential portions of the development, careful selection, storage, and application of these chemicals for use in common areas would help prevent adverse water quality impacts from occurring. Additionally, as discussed above, removal of sediments in the PDFs also would remove sediment-adsorbed pesticides.

Based on the site design, ~~and the source control,~~ LID, and treatment control BMPs designed pursuant to SUSMP and LID Performance Standard requirements, potential post-development impacts associated with pesticides would be less than significant.

Trash and Debris. Urban development tends to generate significant amounts of trash and debris. Trash refers to any human-derived materials, including paper, plastics, metals, glass, and cloth. Debris is defined as any organic material transported by stormwater, including leaves, twigs, and grass clippings (DLWC, 1996). Debris can be associated with the natural condition. Trash and debris can be characterized as material retained on a 5-mm mesh screen. It contributes to the degradation of receiving waters by imposing an oxygen demand, attracting pests, disturbing physical habitats, clogging storm drains and conveyance culverts, and mobilizing nutrients, pathogens, metals and other pollutants that may be attached to the surface.

Urbanization could significantly increase trash and debris loads if left unchecked. However, the project PDFs, including source control and ~~treatment~~ LID BMPs, would minimize the adverse impacts of trash and debris. Source controls, such as street sweeping, public education, fines for littering and storm drain stenciling, can be effective in reducing the amount of trash and debris that is available for mobilization during wet and dry weather events. Common area litter control would include a litter patrol, covered trash receptacles, emptying of trash receptacles in a timely fashion, and noting trash violations by tenants/homeowners or businesses and reporting the violations to the owner/HOA for investigation. Catch basin inserts would be provided for commercial area parking lots. The project's PDFs would remove or prevent the release of floating materials, including solids, liquids, foam, or scum, from runoff discharges and would prevent impacts on dissolved oxygen in the receiving water due to decomposing debris. Based on these considerations, trash and debris would not significantly impact the receiving waters of the project.

Methylene Blue Activated Substances (MBAS). MBAS, which is related to the presence of detergents in runoff, may be incidentally associated with urban development due to commercial and/or residential vehicle washing or other outdoor washing activities. Surfactants disturb the surface tension, which affects insects and can affect gills in aquatic life.

The presence of soap in runoff from the project would be controlled through source control PDFs, including a public education program on residential and charity car washing, and the provision of a car wash pad connected to sanitary sewer in the multi-family residential areas. Other sources of MBAS, such as cross connections between sanitary and storm sewers, are unlikely given modern sanitary sewer installation methods and inspection and maintenance practices. Therefore, MBAS would not significantly impact the receiving waters of the proposed project.

Anti-caking agents would not be a source of cyanide in urban stormwater in the project, and the forgoing discussion suggests that concentrations in stormwater runoff from the project may reach concentrations of magnitude of approximately 10 µg/L, but are highly unlikely to exceed the acute CTR criteria of 22 µg/L.

The detectable concentrations observed in the Santa Clarita River at the mass emission station S29 (average of 10 µg/L) may be in part due to untreated urban stormwater runoff from the City of Santa Clarita. However, other sources are likely to be more significant. A potential source is cyanide from burnt catchments. For example, cyanide concentrations in run-off obtained from an area that had been burned in a wildfire that occurred in Tennessee and North Carolina averaged 49 µg/L. (Barber, T.R., Lutes, C.C., Doorn, M.R.J., Fuchsman, P.C., Timmenga, H.J., and R.L. Crouch, 2003. Aquatic Ecological Risks Due to Cyanide Releases from Biomass Burning. *Chemosphere* 50:33, 343-348, January 2003.) Higher cyanide concentrations were reported in runoff from a wildfire that occurred in New Mexico, with an average value of 80 µg/L.

In addition to the expected relatively low level of cyanide in untreated stormwater, cyanide in runoff from the project would be readily removed by biological uptake, degradation by microorganisms, and by volatilization in the treatment PDFs, especially the dry extended detention basins. Therefore, cyanide would not significantly impact the receiving waters of the project.

(d) Summary for Pollutants of Concern

With the exception of runoff volume ~~and total aluminum~~ and chloride loads (but not concentrations), concentrations and loads of modeled constituents would decrease ~~under following project buildout for~~ the post-development condition, when compared to existing conditions. The modeled concentrations in runoff from developed areas with PDFs are below all benchmark water quality objectives and criteria and TMDL wasteload allocations for the Santa Clara River, and are addressed by a comprehensive site design, source control, LID, and treatment control strategy.

Concentrations of hydrocarbons are expected to increase, while concentrations of pathogens, pesticides and trash and debris may or may not increase under proposed conditions when compared to existing conditions. However, none of the qualitatively assessed constituents would significantly impact receiving waters due to the implementation of the project PDFs in compliance with the SUSMP requirements and the LID Performance Standard.

The project site design, source control, LID, treatment control, and hydromodification control BMPs planned as PDFs meet or exceed the requirements of the MS4 Permit, including SUSMP requirement and the LID Performance Standards. Therefore, potential impacts from Landmark Village on receiving water quality are expected to be less than significant.

(3) Post-Development Operational Impacts to Groundwater

Discharge from the project's developed areas to groundwater would occur in three ways: (1) through general infiltration of irrigation water; (2) through ~~incidental~~ infiltration of urban runoff in the proposed ~~treatment control~~ LID BMP PDFs after treatment; and (3) through infiltration of urban runoff, after treatment in the project PDFs, into the groundwater under the Santa Clara River, which is the primary recharge zone for groundwater in the Santa Clara Valley. Groundwater quality would be fully protected through implementation of the project's site design, source control, LID, and treatment control BMP PDFs prior to discharge of project runoff to groundwater.

The pollutant of concern with respect to groundwater is nitrate-N plus nitrite-N. The Basin Plan groundwater quality objective for nitrate-nitrogen plus nitrite-nitrogen is 10 mg/L (which is more stringent than the objective for nitrate-nitrogen alone (10 mg/L) and for nitrite-nitrogen alone (1 mg/L)). The predicted nitrate-nitrogen plus nitrite-nitrogen concentration in runoff after treatment in the project PDFs is 0.5-6 mg/L, which is well below the groundwater quality objective. Therefore, infiltration of post-development stormwater runoff would not cause significant adverse groundwater quality impacts.

Wastewater generated by the Landmark Village project would be treated in the Newhall Ranch WRP. Treatment at the Newhall Ranch WRP would consist of screening, activated sludge secondary treatment with membrane bioreactors, nitrification/denitrification, ultraviolet disinfection, and partial reverse osmosis. Discharges from the Newhall Ranch WRP treatment facility are permitted by a NPDES Permit and WDRs issued by the RWQCB in October 2007 (LARWQCB, 2007). Treated effluent from the Newhall Ranch WRP would be used to supply distribution of recycled water throughout the Specific Plan area for irrigation of landscaping and other approved uses. The WRP permit contains effluent limitations that would control the amount of conventional, non-conventional, and toxic pollutants discharged to the receiving waters. These effluent limits are a combination of technology-based limits (per 40 C.F.R. section 122.44(a)) and water quality-based limits (per 40 C.F.R. section 122.44(d)). The effluent limitation contained in the Newhall Ranch WRP permit for nitrate-N plus nitrite-N is 5 mg/L, and the limitation for nitrite-N is 0.9 mg/L (average monthly). As the Basin Plan groundwater quality objective for nitrate-nitrogen plus nitrite-nitrogen is 10 mg/L or 1 mg/L for nitrite-nitrogen, the Newhall Ranch WRP irrigation water supply that would serve Landmark Village would be well below the groundwater quality objectives. On this basis, infiltration of irrigation water would not cause significant adverse groundwater quality impacts.

For a discussion of impacts associated with perchlorate-contaminated groundwater, please see this EIR, **Section 4.10, Water Service**.

(4) Post-Development Operational Impact Associated with Pollutant Bioaccumulation

Certain pollutants have the potential to accumulate in ponded water, and/or in ~~treatment~~ LID BMP vegetation and soils, potentially increasing the risk of exposure to wildlife and the food chain. Factors that could affect the extent of potential bioaccumulation include the following:

- The bioavailability of the pollutant;
- Conditions in the soils (e.g., pH, acid-volatile sulfide concentration, organic content) that affect the form and bioavailability of the pollutant;
- The efficiency by which pollutants in the soils enter the plant community, the storage of these pollutants in plant tissues that are edible, and the utilization of the plants as a food source by animals;
- The type of habitats, organisms attracted to these habitats and their feeding habits; and
- BMP system design and maintenance.

The primary pollutants of concern with regard to bioaccumulation are mercury and selenium. However, as indicated by the water quality monitoring conducted by Los Angeles County at the Santa Clara River mass emission station S29 (LACDPW, 2005), selenium and mercury are not naturally present at levels of concern in this watershed. Since these pollutants would not be introduced by the project, bioaccumulation of selenium and mercury is not expected.

The potential for bioaccumulation impacts from the proposed ~~bioretention, vegetated swale, and extended detention basin facilities~~ parcel-based and sub-regional LID BMPs would be minimal. Since the site is largely impervious, very little coarse solids and associated pollutants would likely be generated. The vegetation and soil media in the facilities would trap sediments and pollutants in the soils, which contain bacteria that metabolize and transform trace metals, therefore, reducing the potential for these pollutants to enter the food chain. The facilities do not provide open water areas and would not likely attract waterfowl.

Bioaccumulation of pollutants in the Santa Clara River is not of concern due to the low concentrations of pollutants, which are below the benchmark Basin Plan objectives and CTR criteria predicted in the treated runoff. Also, sediments in the Santa Clara River are transported downstream in the wet season by storm flows and, therefore, do not accumulate.

On this basis, the potential for bioaccumulation and adverse effects on waterfowl and other species would be less than significant.

(5) Post-Development Operational Impact Associated with Dry Weather Flows

~~While there are no specific requirements in the MS4 Permit and the SUSMP requirements to treat dry weather discharges from the project area, p~~ Pollutants in dry weather flows also could be of concern because dry weather flow conditions occur throughout a large majority of the year, and because some of the TMDLs in downstream reaches of the Santa Clara River are applicable for dry weather conditions (e.g., nutrients and chloride).

Dry weather flows typically are low in sediment because the flows are relatively low, and coarse suspended sediment tends to settle out or is filtered out by vegetation. As a consequence, pollutants that tend to be associated with suspended solids (e.g., phosphorus, some bacteria, some trace metals and some pesticides) typically are found in very low concentrations in dry weather flows. The focus of the following discussion is, therefore, on constituents that tend to be dissolved (e.g., nitrate and trace metals) or constituents that are so small as to be effectively transported (e.g., pathogens and oil and grease).

In order to minimize the potential generation and transport of dissolved constituents, landscaping in public and common areas would utilize drought tolerant vegetation that requires little watering and chemical application. Landscape watering in common areas, commercial areas, multi-family residential areas, and parks would use efficient irrigation technology with evapotranspiration sensors to minimize excess watering.

In addition, educational programs and distribution of materials (source controls) would emphasize appropriate car washing locations (at commercial car washing facilities or the car wash pad in the multi-family residential areas) and techniques (minimizing usage of soap and water), encourage low-impact landscaping and appropriate watering techniques, appropriate swimming pool dechlorination and discharge procedures, and discourage driveway and sidewalk washing. Illegal dumping would be discouraged by stenciling storm drain inlets and posting signs that illustrate the connection between the storm drain system and the receiving waters and natural systems downstream.

~~The bioretention areas, vegetated swales, and the extended detention basin~~The parcel-based and sub-regional LID BMPs would provide treatment for and infiltrate dry weather flows and small storm events. Water cleansing is a natural function of vegetation and biologically-active media, offering a range of treatment mechanisms. Sedimentation of particulates is the major removal mechanism. However, the performance is enhanced as plant materials allow pollutants to come in contact with vegetation and soils containing bacteria that metabolize and transform pollutants, especially nutrients and trace metals. Plants also take up nutrients in their root system. Some pathogens would be removed through ultraviolet light degradation. Any oil and grease would be effectively adsorbed by the vegetation and soil within the low flow wetland vegetation. Dry weather flows and small storm flows would infiltrate into the bottom of the basin facility after receiving treatment in the low flow wetland vegetation.

The ~~treatment control~~LID BMP PDFs would infiltrate or evapotranspire all expected dry weather runoff from the project. It is expected that no dry weather discharge would occur to the Santa Clara River from the project. Based on source control PDFs reducing the amount of dry weather runoff and ~~treatment control~~LID BMP PDFs capturing and treating the dry weather runoff that does occur, the impact from dry weather flows is considered less than significant.

(5) **Post-Development Operational Impact Associated with Hydromodification**

Development typically increases impervious surfaces on formerly undeveloped (or less developed) landscapes, reducing the capture and infiltration of rainfall. The result is that, as a watershed develops, a larger percentage of rainfall becomes runoff during any given storm. In addition, runoff reaches the stream channel more efficiently due to the development of storm drain systems, so that, if no controls are implemented, the peak discharge rates for rainfall events and floods are higher for an equivalent event than they were prior to development. Further, the introduction of irrigation and other dry weather flows can change the seasonality of runoff reaching natural receiving waters. These changes, in turn, affect the stability and habitat of natural drainages, including the physical and biological character of these drainages. This process is termed “hydromodification.” (SCCWRP, 2005)

Flows from the Landmark Village project site, the SR-126 improvements, Long Canyon Bridge, and the utility corridor would be discharged directly to the Santa Clara River. Therefore, this analysis addresses the potential for hydromodification impacts to the Santa Clara River as a result of the proposed project. The impervious surfaces associated with the proposed water tank are very minor and would not alter drainage patterns; therefore, no potential for hydromodification impacts exists from these areas of the project.

The physical alteration of natural drainages, such as bank protection, energy dissipaters, and bridge abutments, are not impacts created by changes in runoff seasonality, volume, duration, or flow associated with development. Instead, these types of alterations are physical alterations to the streambed and bank, with associated effects on stream habitat and species. These types of effects are analyzed in **Section 4.4, Biota**, of the Recirculated EIR and Section 4.5, Floodplain Modification, of the Draft EIR.

(a) **Wet Weather Flows**

The project proposes development of approximately ~~80-76~~ percent (~~233-221~~ acres) of the 292.6-acre tract map site; the remaining ~~59.671.3~~ acres would be used for trails, parks, open space, and vegetated slopes and water quality BMPs. Overall, approximately ~~61-64~~ percent (~~178.4187~~ acres) of the tract map area would be impervious and ~~39-36~~ percent (~~114.2105.6~~ acres) would be vegetated. The size of the project in comparison to both the 1,618 square mile total watershed area and the expected total impervious area in the watershed in the existing condition and at buildout is small. It is estimated, based on the land use data provided by LACDPW, that the proposed project would comprise 0.5 percent of the total impervious area in the watershed encompassing the project location at ultimate buildout for the watershed.

A series of progressive hydromodification control measures would be used throughout the project site to prevent and control hydromodification impacts to the Santa Clara River:

- Avoid, to the extent possible, the need to mitigate for hydromodification impacts by preserving natural hydrologic conditions and protecting sensitive hydrologic features, sediment sources, and sensitive habitats.
- Minimize the effects of development through site design practices (e.g., reducing connected impervious surfaces and providing buffer areas) and implementation of stormwater volume-reducing BMPs (project-based hydromodification source control).
- Mitigate hydromodification impacts in-stream using geomorphically based channel design measures (e.g., buried soil cement bank stabilization).

Project-based Hydrologic Source Control. Disconnecting impervious areas from the drainage network and adjacent impervious areas is a key approach to protecting channel stability. Several hydrologic source controls would be included in the project design that would limit impervious area and disconnect imperviousness:

~~Low Impact/Site Design and LID BMPs.~~ Low impact/sSite design and LID PDFs would help to reduce the increase in runoff volume. These PDFs include the clustering of Specific Plan development into village areas, including the Landmark Village; the preservation of ~~70-74~~ percent of the Specific Plan area in open space, and ~~59.671.3~~ acres (~~20-24~~ percent) of the tract map site in trails, slopes, open space, and vegetated ~~water quality treatment~~LID BMPs; routing of impervious area runoff to vegetated areas; use of native (and/or non-native/non-invasive) and drought tolerate plants in landscaped areas; and the use of efficient irrigation systems in common area landscaped areas. These measures will help to protect the stability of the Santa Clara River, and avoid and minimize direct impacts to the River.

LID BMPs. The project's LID BMPs would also serve as hydromodification source control BMPs. Parcel-based and regional LID BMPs would provide volume reduction ranging from incidental volume reduction in biofiltration BMPs (via evaporation and infiltration) up to full volume reduction of captured water in infiltration BMPs where soil and hydrogeologic conditions permit. Collectively these vegetated LID BMP facilities are expected to provide significant reduction in wet weather runoff. In addition, these facilities would also receive and eliminate dry weather flows.

~~Treatment Controls.~~ The project's treatment control BMPs also would serve as hydromodification source control BMPs. ~~Vegetated swales, bioretention areas, and extended detention basins can provide volume reduction on the order of 38 percent for vegetated swales and bioretention and 30 percent for extended detention basins. (Strecker, E. et al., 2004. Analyses of the Expanded EPA/ASCE International BMP Database and Potential Implications for BMP Design, World Water and Env't. Cong. Proc. (June 27 July 1, 2004). Collectively these vegetated treatment facilities are expected to provide significant reduction in wet weather runoff. In addition these facilities also would receive and eliminate dry weather flows.~~

The increase in impervious surface within the project area is predicted to increase the average annual stormwater runoff volume from the project area by approximately ~~148-131~~ acre-feet per year, after

accounting for the estimated volume reductions in the proposed ~~treatment control~~ LID BMP PDFs. ~~Using conservative values for volume reduction,~~ The treatment control LID BMP PDFs are estimated to reduce the increase in average annual stormwater runoff volume by approximately ~~57-123~~ 57-123 acre-feet per year, which is a ~~19-32~~ 19-32 percent reduction of the predicted average post-development stormwater runoff volume without the treatment control PDFs.

Geomorphically Referenced Channel Design. The hydromodification management approach for the Santa Clara River will incorporate “geomorphically-referenced river engineering,” as described in SCCWRP Technical Report 450 (SCCWRP, 2005a). The goal of this approach is to preserve the appearance of the natural stream channel, to the maximum extent practicable, while maintaining stability in stream channel morphology. The project’s development footprint would allow for the greatest freedom possible for “natural stream channel” activity. This includes establishing buffer zones, and maintaining setbacks to allow for channel movement and adjustment to changes in energy associated with runoff. The engineered structural elements that would be implemented where needed for the Santa Clara River include energy dissipation and bank stabilization.

Energy Dissipation. Energy dissipation at storm drain outfalls provides erosion protection in areas where discharges have the potential to cause localized stream erosion. Erosion protection would be provided at all storm drain outlets to the Santa Clara River.

Bank Stabilization. The project would include ~~buried~~-soil cement bank stabilization along the Santa Clara River and Castaic Creek adjacent to and downstream of the project site where necessary to protect against flooding and erosion pursuant to Federal Emergency Management Administration (FEMA) and LACDPW requirements. In total, approximately 18,600 LF of bank would be provided with buried soil cement protection. This would include approximately 11,000 LF ~~feet~~ fronting the tract map site and approximately 6,400 LF on the south bank, extending east and west downstream (west) of the Long Canyon Road Bridge. The alignment was selected so that bank protection along the River would generally be excavated from non-jurisdictional upland areas adjacent to the River. Installing bank protection in non-jurisdictional areas reduces and/or avoids impacts to the River, has the potential to create new riverbed areas, allows for channel movement and adjustment to changes in energy associated with runoff, and increases riparian habitat. For a complete description of the bank stabilization on the Landmark Village project site, please refer to Section 1.0, Project Description, in the Final EIR.

~~Additional buried bank stabilization would be constructed as part of the approved Newhall Ranch WRP and between The Old Road and Santa Clara River (protecting the utility corridor). The bank protection between The Old Road and the Santa Clara River was approved as part of the Santa Clara River NRMP.~~

Approximately 6,600 LF of TRM or similar bank stabilization ~~stability protection~~ would be provided along the southern edge of the utility corridor downstream or west of the Landmark Village tract map site. TRMs are designed to reinforce vegetation at the root and stem, thereby allowing vegetation to be used as erosion control in areas where flow conditions exceed the ability of natural vegetation to remain

rooted. This includes applications with high slopes or stream banks where grouted rip-rap and concrete channels are aesthetically undesirable.

In summary, although project runoff volumes, flow rates, and durations would increase, potential impacts of hydromodification (i.e., the potential to cause erosion, siltation, or channel instability) would be minimized by the project PDFs. The project's site design PDFs, and volume reductions in ~~treatment controls~~ LID BMP PDFs would minimize increases in runoff volume from the development area, the preferred method for controlling hydromodification impacts from new development. (SCCWRP, 2005a. Effect of Increases in Peak Flows and Imperviousness on the Morphology of Southern California Streams. Technical Report 450. April 2005.)

Potential instream impacts of increased volumes, rates, and flow durations would be managed and mitigated with energy dissipaters at the discharge points to the Santa Clara River, and the River banks would be protected with vegetated buried bank stabilization primarily in non-jurisdictional upland areas adjacent to the River. This type of stabilization technique is the preferred approach for bank stabilization. (SCCWRP, 2005a. Effect of Increases in Peak Flows and Imperviousness on the Morphology of Southern California Streams. Technical Report 450. April 2005.)

For these reasons, the wet weather hydromodification impacts of the project on the Santa Clara River would be less than significant.

(b) Dry Weather Runoff

Source control and LID BMP PDFs will prevent the discharge of dry weather urban runoff from the Project. These PDFs include:

- The use of native and/or non-invasive, climate appropriate vegetation and smart irrigation controls.
- The use of the parcel-based LID BMPs, including, but not limited to, infiltration, bioinfiltration, and biofiltration BMPs placed in common area landscaping in commercial, multi-family residential, institutional, recreational, and park areas, roadway median strips, and parking lot islands (where applicable) and regional infiltration/ biofiltration facilities incorporating natural vegetation.

~~In order to quantitatively address dry weather impacts, a dry weather water balance was performed. The quantity of dry weather flows from urban sources is variable and not easily quantified. Information available from the Irvine Ranch Water District suggests an average dry weather flow from urban areas of 2.9×10^{-4} cfs per urbanized acre (Irvine Ranch Water District [IRWD], 2003). Dry weather flow estimates in Santa Monica, used to design a dry weather flow recycling facility, indicate a range of dry weather flows between 8.3×10^{-5} to 1.8×10^{-4} cfs per urbanized acre (Antich et al., 2003).~~

~~For purposes of conservatively estimating the impacts of dry weather flows, a dry weather discharge of 3.0×10^{-4} cfs per urbanized acre was used in this report. **Table 4.3-35, Predicted Dry Weather Water**~~

Balance, presents a monthly dry weather flow balance for the proposed project. Vegetated swales, bioretention areas, and water quality basins were assumed to infiltrate at 0.05 in/hr. Infiltration volume was calculated as the BMP bottom area times the infiltration rate. Evapotranspiration rates were conservatively assumed to be 60 percent of reference rates from CIMIS Zone 14, in which the project is located. Finally, it was assumed that open space in the project area would result in no dry weather runoff.

It is predicted that all dry weather flows would be infiltrated or removed by evapotranspiration in the ~~treatment control~~ LID BMP PDFs, which also provide hydrologic source control. As a result, no change in seasonality of flows is anticipated to result from development.

Based on comprehensive site planning, source control, and ~~treatment control~~ LID BMP strategy and the above water balance analysis, the potential for dry weather flows to result in hydromodification or associated habitat or water quality impacts is considered less than significant, as shown in **Table 4.3-35**.

Table 4.3-35
Predicted Dry Weather Water Balance

Month	Dry Weather Flow (af) ¹	ETo Capacity (af) ²	Infiltration Capacity (af) ³	Excess Capacity (af) ⁴
January	5.3	0.4	15.6	16.0
February	4.8	0.6	14.1	14.6
March	5.3	0.9	15.6	16.5
April	5.1	1.3	15.1	16.4
May	5.3	1.7	15.6	17.3
June	5.1	2.0	15.1	17.1
July	5.3	2.2	15.6	17.8
August	5.3	1.9	15.6	17.5
September	5.1	1.4	15.1	16.5
October	5.3	1.0	15.6	16.6
November	5.1	0.5	15.1	15.6
December	5.3	0.4	15.6	16.0

Source: Geosyntec, 2008.

¹ Based on dry weather flow of 0.0003 cfs/acre from a range of researched values.

² 60% of Reference ETo from CIMIS Zone 14.

³ Equal to 0.05 in/hr over BMP bottom area.

⁴ Equal to (ETo + Infiltration Capacity) - Dry Weather Flow.

(6) Groundwater Recharge

In a groundwater basin, the effect of urbanization on recharge to underlying groundwater is dependent on land uses, water uses, vegetative cover, and geologic conditions. Groundwater recharge from undeveloped lands occurs from precipitation alone, whereas areas that are developed for agricultural or urban land uses receive both precipitation and irrigation of vegetative cover. In an urban area, groundwater recharge occurs directly beneath irrigated lands and in drainages whose bottoms are not paved or cemented. A memorandum prepared by CH2MHill entitled, “*Effect of Urbanization on Aquifer Recharge in the Santa Clarita Valley*” discusses the general effects of urbanization on groundwater recharge and the specific effects in the Santa Clarita Valley (see Recirculated Draft EIR **Appendix 4.10**).

Currently, the site is irrigated agricultural land. As a result, in the existing condition, recharge occurs within the project site from irrigation and precipitation. On one hand, development of the site would introduce impervious surface over approximately ~~61~~76 percent of the tract map site, which would tend to reduce recharge. In addition, development of agricultural lands would eliminate agricultural irrigation as a source of recharge. On the other hand, development of the site would increase runoff volume discharged after treatment to the Santa Clara River, whose channel is predominantly natural and consists of vegetation and coarse-grained sediments (rather than concrete). The porous nature of the sands and gravels forming the streambed would allow for significant infiltration to occur to the underlying groundwater. ~~Also, the~~The project would introduce landscaping, irrigation, and LID BMP PDFs designed to infiltrate runoff. These project features would increase groundwater recharge from the project. On balance, it is unlikely that the project would result in a significant change in groundwater recharge in the project vicinity. Based on the above discussion, the project’s impact on groundwater recharge is considered less than significant.

Please see **Section 4.10, Water Service**, of the Recirculated EIR for further information regarding the groundwater basin and recharge.

8. PROJECT MITIGATION MEASURES

Although the proposed project may result in potential impacts absent mitigation, the County already has imposed mitigation measures required to be implemented as part of the approved Newhall Ranch Specific Plan. These mitigation measures, as they relate to water quality, are found in the previously certified Specific Plan Program EIR and the adopted Mitigation Monitoring Plan (May 27, 2003). The project applicant has committed to implementing the applicable mitigation measures from the Specific Plan to ensure that future development of the project site would not adversely impact adjacent properties.

SP 4.2-7 The applicant for any subdivision map permitting construction shall satisfy all applicable requirements of the NPDES Program in effect in Los Angeles County to the satisfaction of the County of Los Angeles Department of Public Works. These requirements currently include preparation of an Urban Storm Water Mitigation Plan (USWMP) containing design features and BMPs appropriate and applicable to the subdivision. In addition, the requirements currently include preparation of an SWPPP containing design features and BMPs appropriate and applicable to the subdivision. The County of Los Angeles Department of Public Works shall monitor compliance with those NPDES requirements.

b. Additional Mitigation Measures Proposed by this EIR

In addition to the mitigation measures adopted in connection with the Specific Plan, identified above, the project applicant is committed to implementing project-specific mitigation to ensure that water quality impacts are less than significant. This measure is preceded by "LV," which stands for Landmark Village.

LV 4.3-1 Prior to issuance of a building permit, and as a part of the design level hydrology study and facilities plan, the project applicant shall submit to LACDPW for review and approval of drainage plans showing the incorporation into the project of those water quality and hydrologic control project design features (i.e., the post-development water quality and hydrologic control BMPs)(the "PDFs"), identified in this **Section 4.3**, which PDFs shall be designed to meet the standards set forth in this **Section 4.3**, including the sizing, capacity, and volume reduction performance standards set forth herein, all as summarized in **Table 4.3-138**.

LV 4.3-2 Prior to issuance of a building permit, and as a part of the design level hydrology study and facilities plan, the project applicant shall submit to planning staff for review a Landscape and Integrated Pest Management Plan, identified in this **Section 4.3**, which shall be designed to meet the standards set forth as follows.

A Landscape and Integrated Pest Management Plan shall be developed and implemented for common area landscaping within the Landmark Village Project that addresses integrated pest management (IPM) and pesticide and fertilizer application guidelines. IPM is a strategy that focuses on long-term prevention or suppression of pest problems (i.e., insects, diseases and weeds) through a combination of techniques including: using pest-resistant plants; biological controls; cultural practices; habitat modification; and the judicious use of pesticides according to treatment thresholds, when monitoring indicates pesticides are needed because pest populations exceed established thresholds. The Landscape and Integrated Pest Management Plan will address the following components:

1. Pest identification.
2. Practices to prevent pest incidence and reduce pest buildup.
3. Monitoring to examine vegetation and surrounding areas for pests to evaluate trends and to identify when controls are needed.
4. Establishment of action thresholds that trigger control actions.

Legacy Village project, including 50 acres of parks and trails. The above noted sites can be found on **Figure 1.0-3, Project Boundary/Environmental Setting**.

The remaining unbuilt portions of the Valencia Commerce Center are located approximately 0.5 mile upstream of the confluence of Castaic Creek and the Santa Clara River. Approximately 4 million square feet of building floor area will be developed over the next five to ten years. Additionally, bank stabilization improvements to Castaic Creek and Hasley Creek would be constructed in conjunction with these remaining phases of the Commerce Center.

Urban runoff from the Specific Plan, Entrada, Legacy Village, and the Valencia Commerce Center project areas will discharge to the Santa Clara River after treatment. Each of the projects will utilize LID BMPs, single-family HSCs, and USEPA Green Streets, as applicable, to comply with the LID Performance Standard, vegetated swales, bioretention areas, and/or dry extended detention basins, as well as a full suite of site design and source control BMPs, to address pollutants of concern in stormwater runoff and dry weather discharges from the proposed projects. Urban runoff from the Magic Mountain Theme Park and the Valencia WRP currently drains to the Santa Clara River and will continue to do so in proposed conditions without any anticipated change to stormwater management controls.

The combined effect on modeled pollutant loads and concentrations of the Specific Plan, Entrada, Legacy Village, and the Valencia Commerce Center proposed projects and the existing Magic Mountain Theme Park and Valencia WRP are summarized in **Tables 4.3-37 and 4.3-38**, below, respectively. (Note that only stormwater impacts from runoff from the Valencia WRP site are included in modeled loads and concentrations; wastewater discharges are not included.) As shown in **Table 4.3-36, Predicted Average Annual Combined Runoff Volume and Pollutant Loads for the Newhall Ranch Specific Plan, Legacy Village, Entrada, and Valencia Commerce Center Projects**, when considered cumulatively, runoff volumes and loads of ~~TKN, total nitrogen, total phosphorus, ammonia, dissolved copper, metals,~~ and chloride are predicted to increase, while pollutant loads are expected to decrease for TSS ~~and~~ nitrate-N + nitrite-N, total nitrogen, total phosphorus, total lead, dissolved zinc, and total aluminum. Pollutant concentrations from the combined projects are predicted to decrease for all modeled parameters (**Table 4.3-38**). Increases in pollutant loadings are not anticipated to be significant based on the fact that predicted pollutant concentrations are well below benchmark water quality standards and TMDL wasteload allocations and are primarily within the range of observed concentrations in Santa Clara River Reach 5 (**Table 4.3-38**).

Table 4.3-36
Predicted Average Annual Combined Runoff Volume and Pollutant Loads for the NRSP,
Legacy Village, Entrada, and Valencia Commerce Center Projects

Modeled Parameter	Units	Development Condition		Change
		Existing	Developed w/ PDFs	
Volume	acre-ft/yr	1,500	3,400	1,900
Total Suspended Solids	tons/yr	650	340	-310
Nitrate-N + Nitrite-N	tons/yr	8.0	3.1	-4.9
Ammonia-N	tons/yr	0.9	1	0.1
Total Nitrogen	tons/yr	12.5	9.5	-3.0
Total Phosphorus	tons/yr	2.8	0.9	-1.9
Total Aluminum	tons/yr	3.2	2.7	-0.5
Dissolved Copper	lbs/yr	32	55	23
Total Lead	lbs/yr	42	40	-2
Dissolved Zinc	lbs/yr	400	390	-10
Chloride	tons/yr	43	88	45

Source: Geosyntec, 2011.

Table 4.3-36
Predicted Average Annual Combined Runoff Volume and Pollutant Loads for the
Newhall Ranch Specific Plan, Legacy Village, Entrada, and Valencia Commerce Center Projects

Modeled Parameter	Units	Development Condition		Change
		Existing	Developed w/ PDFs	
Volume	acre-ft	1,245	3,968	2,723
Total Suspended Solids	tons	483	302	-181
Nitrate-N + Nitrite-N	tons	5.4	3.3	-2.1
Total Kjeldahl Nitrogen	tons	5.2	9.6	4.4
Total Nitrogen	tons	10.6	12.9	2.3
Total Phosphorus	tons	1.3	1.5	0.2
Total Aluminum	lbs	4,030	7,396	3,366
Dissolved Aluminum	lbs	732	1,508	776
Dissolved Copper	lbs	39	99	60
Total Lead	lbs	37	77	40
Dissolved Zinc	lbs	477	670	193
Chloride	tons	44	93	49

Source: Geosyntec, 2008.

Table 4.3-37
**Predicted Average Annual Combined Pollutant Concentrations for the Newhall Ranch Specific Plan,
 Legacy Village, Entrada, and Valencia Commerce Center Projects**

Modeled Parameter	Units	Development Condition		Change
		Existing	Developed w/ PDFs	
Total Suspended Solids	mg/L	330	70	-260
Nitrate-N + Nitrite-N	mg/L	4.0	0.7	-3.3
Ammonia Nitrogen	mg/L	0.5	0.2	-0.3
Total Nitrogen	mg/L	6	2	-4
Total Phosphorus	mg/L	1.4	0.2	-1.2
Total Aluminum	ug/L	1580	590	-990
Dissolved Copper	ug/L	8	6	-2
Total Lead	ug/L	10	4	-6
Dissolved Zinc	ug/L	100	40	-60
Chloride	mg/L	22	19	-3

Source: Geosyntec, 2011.

Table 4.3-37
**Predicted Average Annual Combined Pollutant Concentrations for the
 Newhall Ranch Specific Plan, Legacy Village, Entrada, and Valencia Commerce Center Projects**

Modeled Parameter	Units	Development Condition		Change
		Existing	Developed w/ PDFs	
Total Suspended Solids	mg/L	285	56	-229
Nitrate N + Nitrite N	mg/L	3.2	0.6	-2.6
Total Kjeldahl Nitrogen	mg/L	3.1	1.8	-1.3
Total Nitrogen	mg/L	6.3	2.4	-3.9
Total Phosphorus	mg/L	0.8	0.3	-0.5
Total Aluminum	ug/L	1,191	685	-506
Dissolved Aluminum	ug/L	216	140	-76
Dissolved Copper	ug/L	12	9	-3
Total Lead	ug/L	11	7	-4
Dissolved Zinc	ug/L	141	62	-79
Chloride	mg/L	26	17	-9

Source: Geosyntec, 2008.

Table 4.3-38
Comparison of Predicted Pollutant Concentrations for the Newhall Ranch Specific Plan, Entrada, Legacy Village, and Commerce Center Projects with Water Quality Criteria and Observed Concentrations in Santa Clara River Reach 5

<u>Modeled Parameter</u>	<u>Units</u>	<u>Predicted Average Annual Concentration</u>	<u>TMDL/ LA Basin Plan Water Quality Objectives</u>	<u>California Toxics Rule Criteria¹</u>	<u>Wasteload Allocations for MS4 Discharges into the Santa Clara River Reach 5</u>	<u>Range of Observed² Concentrations in Santa Clara River Reach 5</u>
<u>Total Suspended Solids</u>	<u>mg/L</u>	<u>70</u>	<u>Water shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses.</u>	<u>NA</u>	<u>NA</u>	<u>32–51,200</u>
<u>Nitrate-N + Nitrite-N</u>	<u>mg/L</u>	<u>0.7</u>	<u>5</u>	<u>NA</u>	<u>6.8³</u>	<u>0.2–4.0</u>
<u>Ammonia-N</u>	<u>mg/L</u>	<u>0.2</u>	<u>2.0⁴</u>	<u>NA</u>	<u>1.75⁴</u>	<u>0.02–1.4</u>
<u>Total Nitrogen</u>	<u>mg/L</u>	<u>2</u>	<u>Waters shall not contain</u>	<u>NA</u>	<u>NA</u>	<u>0.6–10.4</u>
<u>Total Phosphorus</u>	<u>mg/L</u>	<u>0.2</u>	<u>biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.</u>	<u>NA</u>	<u>NA</u>	<u>0.18–1.8</u>
<u>Dissolved Copper</u>	<u>µg/L</u>	<u>6</u>	<u>NA</u>	<u>32</u>	<u>NA</u>	<u>3.3–22.6</u>
<u>Total Lead</u>	<u>µg/L</u>	<u>4</u>	<u>NA</u>	<u>260</u>	<u>NA</u>	<u>1.1–95</u>
<u>Dissolved Zinc</u>	<u>µg/L</u>	<u>40</u>	<u>NA</u>	<u>250</u>	<u>NA</u>	<u>3.0–37</u>
<u>Total Aluminum</u>	<u>µg/L</u>	<u>590</u>	<u>NA</u>	<u>750</u>	<u>NA</u>	<u>131–19,650</u>
<u>Chloride</u>	<u>mg/L</u>	<u>19</u>	<u>100</u>	<u>NA</u>	<u>100</u>	<u>2.6–290⁵</u>

**Table 4.3-38
Comparison of Predicted Pollutant Concentrations for the Newhall Ranch Specific Plan,
Entrada, Legacy Village, and Commerce Center Projects with Water Quality Criteria and
Observed Concentrations in Santa Clara River Reach 5**

Modeled Parameter	Units	Predicted Average Annual Concentration	TMDL/ LA Basin Plan Water Quality Objectives	California Toxics Rule Criteria ¹	Wasteload Allocations for MS4 Discharges into the Santa Clara River Reach 5	Range of Observed ² Concentrations in Santa Clara River Reach 5
Total Suspended Solids	mg/L	56	Water shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses.	NA	NA	32-6,591
Nitrate-N+ Nitrite-N	mg/L	0.6	5	NA	6.8 ³	0.5-4.8
Total Ammonia	mg/L	0.5	2.0 ⁴	NA	1.75 ⁵	<0.005-1.1
Total Nitrogen	mg/L	2.4	Waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.	NA	NA	<0.04-46 ⁶
Total Phosphorus	mg/L	0.3		NA	NA	0.18-13.4
Dissolved Copper	µg/L	9	NA	32	NA	3.3-22.6
Total Lead	µg/L	7	NA	260	NA	0.6-40
Dissolved Zinc	µg/L	62	NA	250	NA	3-37

Modeled Parameter	Units	Predicted Average Annual Concentration	TMDL/ LA Basin Plan Water Quality Objectives	California Toxics Rule Criteria ¹	Wasteload Allocations for MS4 Discharges into the Santa Clara River Reach 5	Range of Observed ² Concentrations in Santa Clara River Reach 5
Total Aluminum	µg/L	685	NA	750	NA	131–19,650
Chloride	mg/L	17	100	NA	100	3–121

Source: Geosyntec, 2010, 2011.

¹ Hardness = 250 mg/L, based on minimum observed value at USGS Station 11108500. Lead criteria is for total recoverable lead. NAWQC aluminum criteria for pH 6.5 – 9.0.

² Range of concentrations observed in the Santa Clara River during wet weather (see Section 2.3.1 of **Appendix 4.3**).

³ 30-day average.

⁴ 30-day average in Reach 5 below Valencia.

⁵ This value was observed in 1965.

NA – not applicable

Source: Geosyntec, 2008.

¹ Hardness = 250 mg/L, based on minimum observed value at USGS Station 11108500. Lead criteria is for total recoverable lead. NAWQC aluminum criteria for pH 6.5 – 9.0.

² Range of concentrations observed in the Santa Clara River during wet weather (Stations S29, NR1, and NR3, see Section 2.3.1 of Recirculated Draft EIR **Appendix 4.3**).

³ 30-day average.

⁴ 4-day average, ELS present, 90th percentile pH and temperature pairing observed at USGS Monitoring Station 11108500.

⁵ 30-day average in Reach 5 below Valencia.

⁶ Observed values for TKN (ammonia plus organic nitrogen).

NA – not applicable

As discussed above, the anticipated quality of effluent expected from Landmark Village would not contribute concentrations of pollutants of concern that would be expected to cause or contribute to a violation of the water quality standards in the project's receiving waters. Therefore, the project's incremental effects on surface water quality are not expected to be significant.

The Landmark Village project's surface runoff water quality, after PDFs, both during construction and post-development, is predicted to comply with adopted regulatory requirements that are designed by the RWQCB to assure that regional development does not adversely affect water quality, including MS4 Permit and SUSMP requirements; Construction General Permit and General Dewatering Permit requirements; and benchmark Basin Plan water quality objectives, CTR criteria, and TMDLs. Any future urban development occurring in the Santa Clara River watershed also must comply with these requirements. By extrapolating the results of the direct and cumulative impact analysis modeling, it can be predicted that analysis of other proposed development combined with existing conditions would have similar water quality results. Therefore, cumulative impacts on surface water quality of receiving waters from the project and future urban development in the Santa Clara Watershed are addressed through compliance with the MS4 Permit and SUSMP requirements; Construction General Permit and General Dewatering Permit requirements; and benchmark Basin Plan water quality objectives, CTR criteria, and TMDLs, which are intended to be protective of beneficial uses of the receiving waters. Based on compliance with these requirements designed to protect beneficial uses, cumulative water quality impacts are mitigated to a level that is less than significant.

b. Groundwater Quality

As discussed above, the anticipated quality of runoff discharges from the project's developed areas and irrigation to groundwater would not contribute loads or concentrations of pollutants of concern that would be expected to cause or contribute to a violation of the groundwater quality standards. By extrapolating these results to existing and proposed development throughout the watershed, and based on a review of adapted plans and projections, it is concluded that no adverse cumulative effects would occur to groundwaters. Therefore, the project's incremental effects on groundwater quality are not expected to be significant.

The project's discharges to groundwater, after PDFs, both during construction and post-development, would comply with adopted regulatory requirements that are designed by the RWQCB to assure that regional development does not adversely affect water quality, including the Project LID Performance Standard, MS4 Permit and SUSMP requirements; Construction General Permit and General Dewatering Permit requirements; and benchmark Basin Plan groundwater quality objectives. Any future urban development occurring in the Santa Clara River watershed must also comply with these requirements.

Therefore, cumulative impacts on groundwater quality from the proposed project and future urban development in the Santa Clara Watershed are addressed through compliance with the MS4 Permit and SUSMP requirements; Construction General Permit and, General Dewatering Permit requirements; and benchmark Basin Plan groundwater quality objectives, which are intended to be protective of beneficial uses of the groundwater. Based on compliance with these requirements designed to protect beneficial uses, cumulative groundwater quality impacts are mitigated to a level that is less than significant.

c. Groundwater Recharge

Increased urbanization in the Santa Clarita Valley has resulted in the irrigation of previously undeveloped lands. The effect of irrigation is to maintain higher soil moisture levels during the summer than would exist if no irrigation were occurring. Consequently, a greater percentage of the fall/winter precipitation recharges groundwater beneath irrigated land parcels than beneath undeveloped land parcels. In addition, urbanization in the Santa Clarita Valley has occurred in part because of the importation of State Water Project (SWP) water, which began in 1980. SWP water use has increased steadily, reaching nearly 44,500 acre-feet (AF) in 2003. Two-thirds of this water is used outdoors, and a portion of this water eventually infiltrates to groundwater. The other one-third is used indoors and is subsequently routed to local WRPs and then to the Santa Clara River (after treatment). A portion of this water flows downstream out of the basin, and a portion infiltrates to groundwater.

Records show that groundwater levels and the amount of groundwater in storage were similar in both the late 1990s and the early 1980s, despite a significant increase in the urbanized area during these two

4.4 BIOTA

This section replaces the prior version of Section 4.4, Biota, of the Landmark Village Draft EIR (November 2006). The section has been revised to address comments received on the Draft EIR including comments from the California Department of Fish and Game (CDFG), and to incorporate the results of additional field surveys and studies. Most of the findings with respect to impacts on special-status biological resources remain unchanged, although various significance conclusions have been re-evaluated and changed due to additional survey results and comments raised during the public review period. The primary changes made to this revised section include: (1) updating the plant communities classification to the current system used by the CDFG (CDFG 2003, updated 2007, Recirculated Draft EIR, **Appendix 4.4**); (2) incorporating the results of bird surveys conducted by Bloom Biological, Inc. (Bloom), and the identification of additional special-status bird species occurring or potentially occurring on the project site; (3) incorporating the results of recent protocol-level surveys for coastal California gnatcatcher conducted by Dudek; (4) incorporating the results of recent protocol-level surveys for arroyo toad conducted by Bloom; (5) restructuring the mitigation section to more clearly identify the previously adopted mitigation measures and the additional measures required by this EIR; (6) providing additional mitigation measures to further reduce potential impacts to wildlife during grading activities and indirect impacts associated with increased human and domestic animals presence; and (7) expanding the cumulative impact discussion to incorporate the findings of Dudek's Santa Clara River Watershed Study (Dudek 2007) and other information.

1. SUMMARY

The Landmark Village project, including the necessary off-site project components, would result in the permanent conversion of, or temporary disturbance to, 428 acres of land currently used for agricultural purposes, 53 acres of California annual grassland, 23.4 acres of coast live oak woodland, 47 acres of undifferentiated chaparral, 1.2 acres of chamise chaparral, 13 acres of mulefat scrub (including disturbed), 32 acres of southern cottonwood-willow riparian, 184.3 acres of coastal scrub, 3.8 acres of southern willow scrub, 15 acres of river wash, 0.5 acre of alluvial scrub, 13 acres of big sagebrush scrub alliances, 0.6 acre of southern coast live oak riparian forest, 7.0 acres of arrow weed scrub, 3.5 acre of herbaceous wetland, 11 acres of developed land, and 249 acres of disturbed land. The entire project site occupies 1,063.2 acres, including the 292.6-acre Landmark Village tract map site and an additional 770.6 acres of off-site land primarily within the boundaries of the approved Specific Plan. The project site includes 87.9 acres of riparian vegetation, including 32.1 acres of riparian woodland (southern coast live oak riparian forest and southern cottonwood-willow riparian) and 55.8 acres of other riparian vegetation communities. The project site includes 975.3 acres of upland vegetation communities and land covers, of which 778.5 acres occur outside the 100-year floodplain. The project site includes 1.4 mile of the Santa Clara River mainstem; this represents 1.6 percent of the overall Santa Clara River mainstem (86 miles). The total Landmark Village project area inclusive of

Engineers (Corps) jurisdictional resources. Significant indirect impacts would occur as a result of increased light and glare, increased non-native plant species, and increased human and domestic animal presence.

The direct and indirect impacts associated with development and operation of the Landmark Village project are consistent with the findings of the Newhall Ranch Specific Plan Program EIR (March 1999)¹ and Revised Additional Analysis (May 2003).² Implementation of the mitigation measures required by the Newhall Ranch Specific Plan Program EIR and the Specific Plan Resource Management Plan (RMP), as well as the additional mitigation measures required by this EIR, would mitigate project-specific impacts to less than significant levels. Due to the incorporation of additional mitigation measures required by this EIR, those project-level impacts identified in the Newhall Ranch Specific Plan Program EIR as significant and unavoidable (i.e., loss of sensitive animal species, coastal sage scrub, and wildlife habitat, and the increase in human and domestic animal presence) would be mitigated to less than significant. The proposed Landmark Village project would contribute toward the cumulative impacts to biological resources. Landmark's contribution to these impacts, however, can be reduced to a less than significant level through mitigation.

~~The direct and indirect impacts associated with development and operation of the Landmark Village project either are consistent with the findings of the Newhall Ranch Specific Plan Program EIR (Impact Sciences, Inc., March 1999) and Revised Additional Analysis (Impact Sciences, Inc., May 2003) or, with the inclusion of newly proposed mitigation measures, have been reduced to a level of less than significant.~~

2. INTRODUCTION

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.6 of the Newhall Ranch Specific Plan Program EIR (SCH No. 1995011015) identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with biological resources for the entire Newhall Ranch Specific Plan. Subsequently, more detailed review was conducted to determine the biological effects of the Specific Plan caused by changes to the hydrology and hydraulics of the Santa Clara River. This updated study is set forth in the Newhall Ranch Revised Additional Analysis (2003), Section 2.3, Floodplain Modifications. The Revised Additional Analysis (Sections 2.2 and 2.4) also examined in greater depth the Salt Creek Corridor and Specific Plan consistency with Los Angeles County (County) General Plan policies pertaining to Significant Ecological Areas (SEA).

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. This section assesses the Landmark Village project's existing conditions, the project's potential biological

¹ County of Los Angeles, *Environmental Impact Report (EIR) for the Newhall Ranch Specific Plan and Water Reclamation Plant* (1999).

² Impact Sciences, Inc., Revised Additional Analysis to the Newhall Ranch Specific Plan and Water Reclamation Plant Final Program EIR, Volume VIII (2003).

resource impacts, and the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR, and any additional mitigation measures recommended by this EIR for the Landmark Village project.

All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan and the County of Los Angeles General Plan and Santa Clarita Valley Area Plan.

b. Newhall Ranch Specific Plan

The approved Newhall Ranch Specific Plan guides future development of the Newhall Ranch community, located in northern Los Angeles County. The Santa Clara River and SR-126 traverse the northern portion of the Specific Plan area. The river extends approximately 5.5 miles east to west across the Specific Plan site. On May 27, 2003, the Los Angeles County Board of Supervisors approved the Specific Plan, which established the general plan, zoning designations, and development standards necessary to develop the Specific Plan site. The approved Specific Plan sets forth a comprehensive set of plans, development regulations, design guidelines, and implementation programs to develop the Specific Plan site, consistent with the goals, objectives, and policies of the Los Angeles County General Plan and

Angeles County line, to approximately 3,200 feet AMSL on the ridgeline of the Santa Susana Mountains along the southern boundary. The primary ridges are east-, west-, and northwest-trending, with secondary ridges trending north and south. There are many distinctive ridges in the Specific Plan area, including Sawtooth Ridge along the northeastern side of Long Canyon, and Ayers Rock at the northern edge of Potrero Canyon.

Native and naturalized habitats within the Specific Plan area are representative of those found in this region and provide high-quality examples of those plant communities found in the Santa Susana Mountains and the Santa Clara River ecosystems. Upland habitats dominate the landscape within the Specific Plan area, both north and south of the Santa Clara River. The major upland plant communities include California sagebrush scrub, undifferentiated chaparral, coast live oak and valley oak woodlands, and California annual grassland. However, the Specific Plan site also contains valley oak/grass, mixed oak woodland, chamise chaparral, California walnut woodland, and big sagebrush scrub. The Santa Clara River supports a variety of riparian plant communities, including southern cottonwood-willow riparian forest, southern willow scrub, southern coast live oak riparian forest, mulefat scrub, elderberry scrub, arrow weed scrub, giant reed, tamarisk scrub, herbaceous wetland, bulrush/cattail wetland, cismontane alkali marsh, and coastal and valley freshwater marsh and seeps. Intermittent and ephemeral drainages on site also provide habitat for alluvial scrubs.

The ~~riparian~~ habitat along the Santa Clara River has been designated as critical habitat by the USFWS for the state- and federally-listed endangered least Bell's vireo (*Vireo bellii pusillus*) and the federally-listed endangered arroyo toad (*Anaxyrus (Bufo) californicus*). The River also provides habitat for the state- and federally listed endangered southwestern willow flycatcher (*Empidonax traillii extimus*). The River itself supports the state- and federally listed endangered and state fully protected unarmored ~~three-spine~~ threespine stickleback (*Gasterosteus aculeatus williamsoni*).

There are two SEAs within the boundary of the approved Specific Plan: (1) the High Country SMA/SEA 20, which is comprised of diverse oak woodland habitats that function as a wildlife corridor/linkage between the San Gabriel and Santa Monica Mountains; and (2) the River Corridor SMA/SEA 23, which is comprised of aquatic habitat within the Santa Clara River corridor that supports the endangered unarmored ~~three-spine~~ threespine stickleback and other listed and sensitive species.

The applicant leases portions of the Specific Plan area for oil and natural gas production, as well as for cattle grazing, ranching, and agricultural operations (e.g., food crop production, dry land farming, honey farming). All such operations are currently ongoing. In addition, the applicant leases the Specific Plan site to the movie industry for set locations. A minor land use includes employee houses, an oil company office, and miscellaneous structures. There are several easements on the Specific Plan site, including oil, natural gas, electrical, telephone, and water easements. In particular, Southern California Edison and Southern California Gas Company maintain distribution lines within on-site easements.

Taxonomic Group/Technical Report	Consultant	Survey Dates/ Season	Methods	Survey References
<i>Oak Tree Surveys</i>	Impact Sciences, Land Design Consultants, Richard Johnson & Associates, Inc., Dudek	2003–2006	<p>Biologists conducted on-site surveys and evaluations of the oak trees pursuant to the Los Angeles County Oak Tree Ordinance between 2003 and 2006. The Specific Plan area was covered on foot through areas where oak trees occur within the proposed Project development area (including a 200-foot buffer). Only oak trees subject to CLAOTO were mapped. Oak trees subject to CLAOTO were also mapped within the VCC and Entrada planning areas. <u>In addition, to comply with Public Resources Code § 21083.4, biologists surveyed the site's oak woodlands, which are defined as areas with at least 10% cover by oak trees with an understory of non-grass vegetation and at least 20% cover by oak trees with an understory of grass vegetation. Oak/grass includes areas where oak trees comprise between 10% and 20% of the total cover with an understory of grass vegetation. These surveys not only captured oak woodland habitat, but also the entire range of oak trees in terms of size and maturity, including those trees that are five (5) inches or greater in diameter, measured at breast height, as specified in Public Resources Code §21083.4(a).</u> Tree stands (tree groupings) outside of these areas, in undisturbed or preserved areas, were delineated on aerial images and evaluated in the field via a sampling protocol and later statistically analyzed for population estimates. Oak trees were surveyed from the base of each tree.</p>	<p>Impact Sciences 2006B, 2006C, 2006D</p> <p>County of Los Angeles 1999; Land Design Consultants 2007; RJA 2007; Dudek 2007D</p>

Taxonomic Group/Technical Report	Consultant	Survey Dates/Season	Methods	Survey References
<i>Jurisdictional Delineation of Waters and Streambeds</i>	URS	2003	The focus of the delineation was the Santa Clara River and its tributaries within the Newhall Ranch Specific Plan area. Published Corps/CDFG delineation protocols were utilized in the field.	URS 2003
	Glenn Lukos Associates, Inc	2006	The focus of the delineation was the Santa Clara River and its tributaries within the Entrada planning area. Published Corps/CDFG delineation protocols were utilized in the field.	Glenn Lukos Associates, Inc. 2006
<i>Invertebrates (Fairy Shrimp)</i>	Dudek	December 2007–March 2008	Wet season vernal pools surveys were conducted in five previously identified depressions associated with western spadefoot surveys in the Specific Plan area, three in Potrero Canyon (Crawford 2007), one between Lion Canyon and Grapevine Mesa, and one east of Lion Canyon (Compliance Biology 2006C). Two of the five depressions retained water in 2007/2008 and were surveyed for shrimp presence.	Dudek 2008E

Taxonomic Group/Technical Report	Consultant	Survey Dates/Season	Methods	Survey References
<i>Invertebrates (Butterflies)</i>	RECON	March 15–May 10, 1999	Focused surveys for quino checkerspot butterfly and its associated habitat were conducted. The survey area included the Specific Plan Phase 1 development area (the northern portion of the Specific Plan area, including the Santa Clara River Valley, Homestead Canyon, Off-Haul Canyon, San Martinez Grande, Mid-Martinez Grande, and Chiquito Canyon).	RECON 1999C
	Compliance Biology, Guy Bruyea	April and May 2004	The Newhall Ranch Specific Plan site and the Entrada planning area were surveyed to determine the presence or absence of San Emigdio blue butterfly, quino checkerspot butterfly, and their associated host plants. A general butterfly inventory was also conducted. Surveys were also conducted on Stevenson Ranch Phase V, adjacent to the Specific Plan area.	Compliance Biology 2004A, 2004B, 2004C, 2005
		April and May 2005	The Salt Creek Canyon Preservation area was surveyed to determine the presence or absence of San Emigdio blue butterfly, quino checkerspot butterfly, and their associated host plants. A general butterfly inventory was also conducted.	
<i><u>Invertebrates (Aquatic Gastropods)</u></i>	Dudek	June 2007	Biologists conducted a site visit to the Middle Canyon Spring as well as the lower reach of the Middle Canyon drainage to document the biotic conditions of the spring area, including the presence of an the undescribed snail (<i>Purgulopsis sp. nova</i>), and subsequently described as <i>Purgulopsis castaicensis n. sp.</i>	Dudek 2007C

Taxonomic Group/Technical Report	Consultant	Survey Dates/ Season	Methods	Survey References
<u>Invertebrates (Terrestrial Gastropods)</u>	<u>Lawrence Hunt, Chris Huntley, David Crawford, and Matt Carpenter</u>	<u>November 5, 2009-January 15, 2010</u>	<u>Surveys for terrestrial mollusks were conducted on five days in portions of the Newhall Ranch Specific Plan area, including Landmark Village, the Salt Creek area, High Country SMA, and River Corridor SMA. Survey methods included control sites that consisted of suitable habitat in areas not proposed for development or intended as mitigation lands in both Los Angeles and Ventura counties. These areas included other portions of Santa Clara River; portions of the Piru Creek watershed; north base of Oak Ridge; lower Sespe Creek; Hasley Canyon watershed; Castaic Junction area; and Castaic Creek watershed southeast of Castaic Lake. Surveys were conducted in several vegetation community types, including, but not limited to, California annual grassland, coastal scrub, riparian woodland, riparian scrub, big sagebrush scrub, mulefat scrub, oak woodland, and chaparral. Surveys focused on suitable microhabitats within these communities where terrestrial mollusks these species have the potential to occur, including, but not limited to, brush and debris piles, rock piles, isolated rocks, leaf litter, logs, trash/debris piles, and other unique features that may provide soil moisture or refugia. These areas were searched by raking through leaf and stick litter, visually inspecting cracks and crevices, and turning over objects, such as logs and rocks. Specimens were tentatively identified in the field, and then sent to Dr. Barry Roth, a Helminthoglypta snail expert located at the California Academy of Science in San Francisco, California, for positive identification.</u>	<u>C. Huntley, pers. comm. 2010</u>
<u>Invertebrates (General Insects)</u>	<u>Jones et al. CSU, Fullerton</u>	<u>April and May 2004</u>	<u>An observational and sampling study of potential pollinators of the San Fernando Valley spineflower was conducted in areas occupied by the spineflower, resulting in a compilation of the insects occurring in these areas.</u>	<u>Jones et al. 2004</u>

**Table 4.4-4
Existing Vegetation Communities, Floristic Alliances, and Associations and Land Cover Types
in the Project Area**

General Physiognomic and Physical Location	General Habitat Type	Floristic Alliance	Association	Acreage	
Grass and Herb Dominated Communities	Non-Native Grassland	California annual grassland	Not mapped to association level	52.7	
Scrub and Chaparral	Coastal Scrub	California sagebrush scrub	Not mapped to association level	80.7 1	
			California sagebrush - Artemesia	0.4	
			California sagebrush-purple sage	8.5	
			California sagebrush-black sage scrub	California sagebrush-black sage	6.0
			California sagebrush-California buckwheat scrub	Not mapped to association level	26.1
			California sagebrush scrub-undifferentiated chaparral	Not mapped to association level	61.6 8
	Undifferentiated Chaparral Scrubs	Not mapped to alliance level	Not mapped to association level	47.2	
	Chaparral with Chamise	Chamise chaparral	Not mapped to association level	1.2	
Broad Leafed Upland Tree Dominated	Oak Woodland and Forest	Coast live oak forest and woodland	Coast live oak woodland	23.4	
Riparian and Bottomland Habitat	Other Riparian/Wetland	Herbaceous wetland	Not mapped to association level	3.5	
			River wash	Not mapped to association level	15.2
			Alluvial scrub	Not mapped to association level	0.5
			Big sagebrush scrub	Not mapped to association level	12.2
			Big sagebrush-California buckwheat	0.5	
	Low to High Elevation Riparian Scrub	Arrow weed scrub	Not mapped to association level	7.0	

California Natural Diversity Database (CDFG 2003, updated 2007, Recirculated Draft EIR, **Appendix 4.4**). These 16 communities (and alliances/associations) include the following:

- California annual grassland
- southern cottonwood–willow riparian
- coast live oak woodland
- coastal scrub (including California sagebrush scrub)
- California sagebrush (California sagebrush–purple sage, California sagebrush–black sage, California sagebrush–California buckwheat scrub, California sagebrush scrub–undifferentiated chaparral)
- undifferentiated chaparral scrubs
- chamise chaparral
- arrow weed scrub
- mulefat scrub (including disturbed)
- southern willow scrub
- southern coast live oak riparian forest
- big sagebrush scrub (including big sagebrush scrub–California buckwheat)

Table 4.4-4 includes, where applicable, the vegetation communities corresponding to the CDFG (2003, updated 2007, Recirculated Draft EIR, **Appendix 4.4**) system. Three of the described communities (herbaceous wetland, river wash, and alluvial scrub) do not fit a defined CDFG plant community classification and, therefore, are defined by their dominant plant species on a site-specific basis. The plant communities and the land uses occurring on the project site are discussed below. The plant communities and land uses have been mapped on the project site as shown on **Figure 4.4-3, Plant Communities and Land Uses at the Landmark Village Project Site**. A list of all plant species observed on the project site is included in CNDDDB Map.⁶

(1) Grass and herb dominated communities (40.000.00)⁷

(a) Non-Native Grassland (42.000.00)

California Annual Grassland (42.040.00). There are 52.7 acres of California annual grassland on the project site. These grasslands occur along the northwestern portion of the tract map site, and within the Adobe Canyon borrow site and the Chiquito Canyon grading site. These areas are dominated by

⁶ The CNDDDB Map is available on the California Department of Fish and Game Web site at www.dfg.ca.gov/biogeodata/cnddb/rarefind/asp (last accessed July 22, 2009).

⁷ Species identification numbers refer to California Natural Diversity Database (CNDDDB) vegetation classifications for that species.

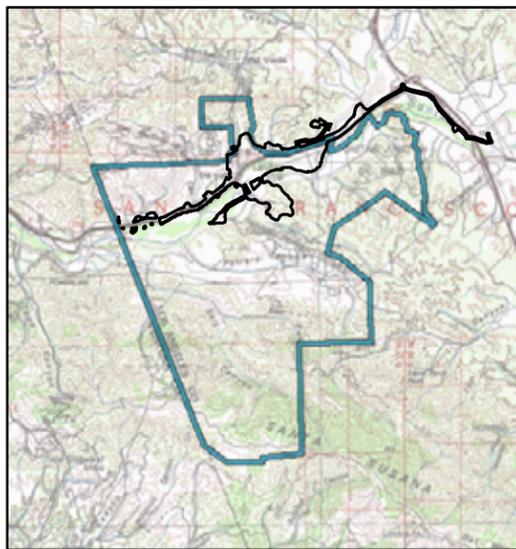
non-native grasses such as brome grasses (*Bromus diandrus*, *B. madritensis* ssp. *rubens*, *B. hordeaceus*), wild oats (*Avena fatua*, *A. barbata*) and rat-tail fescue (*Vulpia myuros* ssp. *myuros*). The areas also include herbaceous ruderal species such as red-stemmed filaree, dead nettle (*Lamium amplexicaule*), black mustard, milk thistle (*Silybum marianum*), and star-thistle (*Centaurea* spp.). Native grass species occurring in low densities (less than 10 percent) within the non-native grasslands include purple needlegrass (*Nassella pulchra*), valley needlegrass (*Nassella lepida*), one-sided bluegrass (*Poa secunda*), and few-flowered fescue (*Vulpia microstachys*).

(2) Scrub and chaparral (30.000.00)

(a) Coastal Scrub (32.000.00)

There are 1823.58 acres of coastal scrub (including alliances and associations) on the project site. Of this acreage, 89.06 acres are mapped as the California sagebrush scrub alliance, including 8.9 acres of two California sagebrush scrub associations; 26.1 acres mapped as the California sagebrush–California buckwheat scrub alliance; 6.0 acres mapped as the California sagebrush-black sage association; and 61.68 acres mapped as the California sagebrush scrub–undifferentiated chaparral alliance. Coastal scrubs occur primarily on hill slopes (gentle to steep) within the Chiquito Canyon grading site and the borrow site, as well as in an isolated area in the northwest portion of the tract map site and within the utility corridor. Dominant native species found in these plant communities include California buckwheat (*Eriogonum fasciculatum* var. *foliolosum*) and California sagebrush (*Artemisia californica*). Other common plants include various sages (*Salvia leucophylla*, *S. mellifera*, *S. apiana*), deerweed (*Lotus scoparius*), California aster (*Lessingia filaginifolia* var. *filaginifolia*), California encelia (*Encelia californica*), giant wild-rye (*Leymus condensatus*), and chaparral bushmallow (*Malacothamnus fasciculatus*). The understory generally is sparse and contains native grasses, including valley needlegrass and native herbs such as wishbone bush (*Mirabilis californica*) and morning glory (*Calystegia macrostegia*).

Coastal scrub has been mapped to the alliance level, and in some cases to the association level. Each type is dominated by a particular species that characterizes the alliance/association. In some cases, the dominant plant species may be the only species that is readily apparent. These alliances and associations are listed below.



Legend

- NRSP Boundary
 - Landmark Village Project Site
- Vegetation Communities**
- AGR = Agriculture
 - AS = Alluvial scrub
 - AWS = Arrow weed scrub
 - BSS = Big sagebrush scrub
 - BSS-CB = Big sagebrush scrub-California buckwheat
 - CC = Chamise chaparral
 - CGL = California annual grassland
 - CHP = Undifferentiated chaparral
 - CLOW = Coast live oak woodland
 - CSB = California sagebrush scrub
 - CSB-BS = California sagebrush scrub-black sage
 - CSB-CB = California sagebrush scrub-California buckwheat
 - CSB-CHP = California sagebrush scrub-undifferentiated chaparral
 - CSB-PS = California sagebrush scrub-purple sage
 - DEV = Developed
 - DL = Disturbed land
 - HW = Herbaceous wetlands
 - MFS = Mulefat scrub
 - OC (DEV) = Open channel (developed)
 - RW = River wash
 - SCWRF = Southern cottonwood-willow riparian forest
 - dCSB = Disturbed California sagebrush scrub
 - dMFS = Disturbed Mulefat

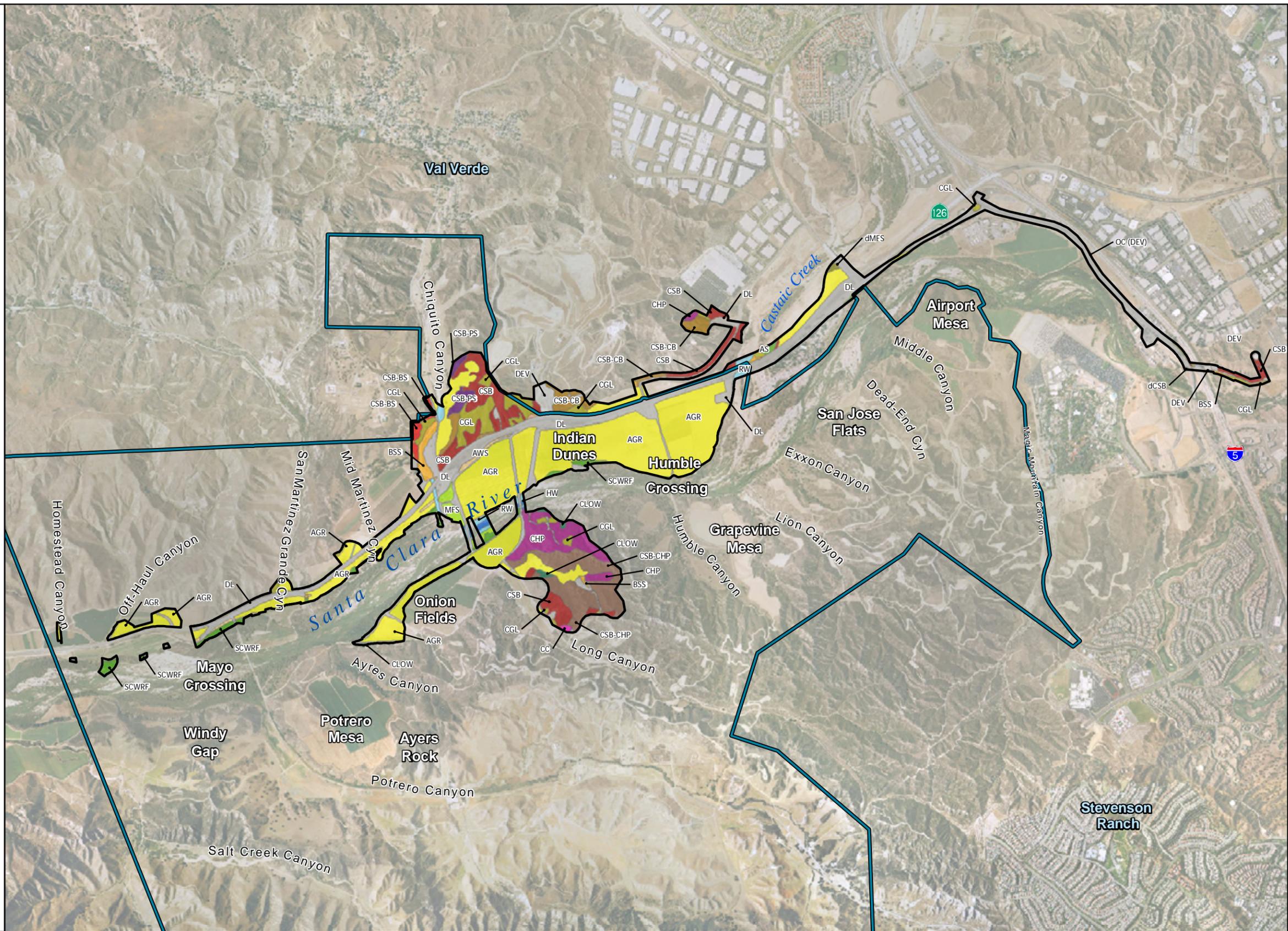
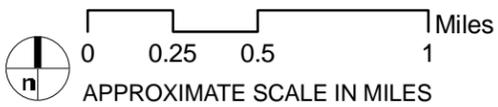


IMAGE SOURCE: DigitalGlobe 2007

(Revised) FIGURE 4.4-3



Plant Communities and Land Uses on the Landmark Village Project Site

California Sagebrush Scrub (32.010.00). There are 89.06 acres mapped as California sagebrush scrub on site. The unburned California sagebrush scrub on site includes a mixture of California sagebrush, black sage, purple sage, and California buckwheat. Other native shrubs in this community located on site include our Lord's candle (*Yucca whipplei*), Mexican elderberry (*Sambucus mexicana*), white sage, California encelia, chaparral bushmallow, giant wild-rye (*Elymus condensatus*), bush monkeyflower (*Mimulus aurantiacus*), coastal prickly-pear (*Opuntia littoralis*), and skunk bush (*Rhus trilobata*). Smaller native species that occur on site include yellow pincushion (*Chaenactis glabriuscula*), long-stem golden yarrow (*Eriophyllum confertiflorum*), common forget-me-not (*Cryptantha intermedia*), common owl's clover, deerweed, wild cucumber (*Marah macrocarpus* var. *macrocarpus*), silver puffs (*Uropappus lindleyi*), slender woolly buckwheat (*Eriogonum gracile* var. *gracile*), granny's hairnet (*Pterostegia drymarioides*), cliff malacothrix (*Malacothrix saxatilis*), and California melic (*Melica imperfecta*). Non-native species occurring on the site include red-stemmed filaree (*Erodium cicutarium*), totalote (*Centaurea melitensis*), Russian thistle (*Salsola tragus*), horehound (*Marrubium vulgare*), and tree tobacco (*Nicotiana glauca*).

~~(3) — Grass and herb dominated communities (40.000.00)⁸~~

Two associations of California sage scrub alliance are also present on site: California sagebrush (32.010.01) and California sagebrush–purple sage (32.010.04). These associations were mapped in areas where California sagebrush and purple sage are the co-dominant species, although lesser amounts of the other species listed above may occur.

- California sagebrush (association of California Sagebrush Scrub, dominated only by California sagebrush) (32.010.01) – 0.4 acre
- California Sagebrush–Purple Sage (association of California Sagebrush Scrub, dominated by California sagebrush and purple sage) (32.010.04), including disturbed – 8.5 acres

California Sagebrush–Black Sage Scrub (32.120.00). There are 6.0 acres of this alliance on site, in the California Sagebrush–Black Sage association. In addition to California sagebrush and black sage, this vegetation community supports the following species on site: shrubs, such as yerba santa (*Eriodictyon crassifolium*), our Lord's candle, Great Basin sagebrush (*Artemisia tridentata*), Mexican elderberry, giant wild-rye, and California encelia; native herbaceous species, including yellow-fiddleneck (*Amsinckia menziesii*), common forget-me-not, common eucrypta (*Eucrypta chrysanthemifolia*), California chicory (*Rafinesquia californica*), wild cucumber, and southern sun cup (*Camissonia bistorta*); and non-native species such as short-podded mustard, red-stemmed filaree, and horehound.

~~⁸ Species identification numbers refer to California Natural Diversity Database (CNDDB) vegetation classifications for that species.~~

California Sagebrush–California Buckwheat Scrub (32.110.00). There are 26.1 acres of this alliance present on site. On site, this vegetation community is dominated by California sagebrush and California buckwheat, and also supports native shrubs such as skunk bush, purple sage, Mexican elderberry, goldenbush (*Ericameria palmeri* var. *pachylepis*), and chaparral bushmallow; native wildflowers including wishbone-bush, California poppy (*Eschscholzia californica*), blue dicks (*Dichelostemma capitatum*), coast goldfields (*Lasthenia californica*), globe and angel gilia (*Gilia capitata* and *G. angelensis*); and non-native species, including red-stemmed filaree and short-podded mustard (*Hirschfeldia incana*).

California Sagebrush Scrub–Undifferentiated Chaparral (modified from 32.300.00 Coastal Sage Chaparral Scrub). There are 61.68 acres of this alliance present on site. On site, this vegetation community includes native shrubs, such as California sagebrush, skunk bush, California buckwheat, purple sage, and chaparral bushmallow; smaller native species, such as coastal lotus (*Lotus salsuginosus*), angel's gilia (*Gilia angelensis*), blue dicks, California peony (*Peonia californica*), California aster, whispering bells (*Emmenanthe penduliflora*), fascicled tarweed (*Hemizonia fasciculata*), and tansy-leaved phacelia (*Phacelia tanacetifolia*); and non-native species, including red-stemmed filaree and short-podded mustard.

Undifferentiated Chaparral Scrubs (37.000.00). There are 47.2 acres of undifferentiated chaparral scrubs. Undifferentiated chaparral scrubs occur on the steepest north-facing slopes in Long Canyon. Species found in this plant community include chamise (*Adenostoma fasciculatum*), hoary leaf ceanothus (*Ceanothus crassifolius*), black sage, toyon (*Heteromeles arbutifolia*), California buckwheat, California encelia, bush monkey flower, mountain mahogany (*Cercocarpus betuloides* var. *betuloides*), Mexican elderberry, and heart-leaved penstemon (*Keckiella cordifolia*). The understory is poorly developed due to the dense vegetation cover.

(a) Chaparral with Chamise (37.100.00)

Chamise Chaparral (37.101.00). The 1.2 acres of the mapped chamise chaparral alliance present on site is dominated by chamise and also supports the following: native shrub species, such as hoaryleaf ceanothus, skunk bush, toyon, bladder pod (*Isomeris arborea*), California buckwheat, giant wild-rye, black sage, and California encelia; smaller native plants, including California peony, California aster, wishbone-bush, common forget-me-not, globe gilia, wild cucumber, and chaparral nightshade; and non-native species, including black mustard (*Brassica nigra*) and short-podded mustard.

(4) Broad leafed and upland tree dominated (70.000.00)

Coast Live Oak Woodland (71.060.19). There are 32.4 acres of coast live oak woodland on the project site. This community occurs at the base of north-facing slopes in Chiquito Canyon and Long Canyon and is dominated by coast live oak (*Quercus agrifolia*). The understory is characterized by annual grasses, spiny

the results of the 2004 surveys, small mammals were found to utilize all the habitat types on the project site, but were most abundant in coastal scrub, margins of agricultural fields, coast live oak woodland, and dry wash habitats.

In addition, during 2006 bat surveys, observations or vocalizations of the following common bat species were recorded in the vicinity of the Landmark Village project site: big brown bat (*Eptesicus fuscus*), California myotis (*Myotis californicus*), western pipistrelle (*Pipistrellus hesperus*), and Mexican free-tailed bat (*Tadarida brasiliensis*). (Johnson 2006.)

(4) Gastropods

Three native species of shoulderband snails were detected during the surveys for the Trask shoulderband snail (*Helminthoglypta traskii traskii*) within the Newhall Ranch Specific Plan area and nearby areas. These species included the Southern California shoulderband snail (*Helminthoglypta tudiculata* cf. *H.t. convicta*), Vasquez rocks shoulderband snail (*Helminthoglypta vasquezi*), and Grapevine shoulderband snail (*Helminthoglypta uvasana*) (Huntley 2010). CDFG has not designated any of these species as special-status species.

The Southern California shoulderband snail and Vasquez rocks shoulderband snail were detected in the project area in a variety of habitat types, including California annual grassland, coastal scrub, and in riparian areas. All snails were found in association with their expected microhabitats (i.e., under rocks, in leaf litter, woody debris piles, under the decaying bases of yucca bushes, and similar moist environments). Vasquez rocks shoulderband snail was found at several locations in the proposed project area and proposed open space areas, including the mouth of Middle Canyon; portions of upper Middle Canyon; and the Magic Mountain Canyon watershed. Southern California shoulderband snail was found at several locations in the proposed project area, including the Middle Canyon area.

Grapevine shoulderband snail was not detected in the project area, but was located in the Piru Creek floodplain near the confluence with the Santa Clara River downstream of the project area. This species was previously known only from the type locality near Fort Tejon State Historical Park in Kern County. This detection extends the known range of this species at least 42 miles southwest of the type locality and greatly expands the known distribution of the species. Based on these new occurrences, this species is expected to also occur in the project area.

Although the Trask shoulderband was not detected during the surveys, based on the presence of coastal scrub, riparian and chaparral vegetation communities, and the occurrence of the Trask shoulderband snail downstream along the Santa Clara River in the Fillmore area, it was concluded that the Trask shoulderband snail subspecies *H. t. traskii* potentially occurs in the project area.

c. Wildlife Habitat Linkages/Regional Open Space

Wildlife corridors are described as pathways or habitat linkages that connect discrete areas of natural open space otherwise separated or fragmented by topography, changes in vegetation, and other natural or human induced factors such as urbanization. The fragmentation of natural habitat creates isolated “islands” of vegetation that may not provide sufficient area or resources to accommodate sustainable populations for a number of species. Wildlife corridors: (1) allow animals to move between remaining habitats to replenish depleted populations and increase the available gene pool; (2) provide live-in habitat for some species; (3) provide escape routes from fire, predators, and human disturbances, which reduce the risk that catastrophic events (such as fire or disease) will result in population or species extinction; and (4) serve as travel paths for individual animals moving throughout their home range in search of food, water, mates, and other needs, or for dispersing juveniles in search of new home ranges.

The following discussion of wildlife movement and habitat linkages with respect to the project site and surrounding open space areas is based on extensive field visits of these areas that have occurred during varying seasons over the past decade by numerous biologists surveying and studying the Newhall Ranch Specific Plan area, particularly in association with the Newhall Ranch Specific Plan Program EIR, the Final Additional Analysis, and the related Biological Constraints Analysis (BCA) and Biota Report for the Specific Plan. It is also based on: (1) a review of available aerial photography and mapping of the Specific Plan and adjacent watersheds in both Los Angeles County and Ventura County; (2) an evaluation of habitat types and distribution associated with the Landmark Village project site and surrounding areas; (3) a review of the animal species known to use or expected to utilize these habitats; and (4) the conceptual regional wildlife habitat linkage design identified in the South Coast Missing Linkages Project (Penrod et al. 2006, Recirculated Draft EIR, **Appendix 4.4**). While numerous observations have been made over the past decade of a variety of wildlife species within and adjacent to the Specific Plan area (including the Landmark Village site), the focus of this discussion is from a watershed and habitat perspective, as the preservation of habitats within watersheds that link remaining open space areas is

b. Oaks

The County of Los Angeles Oak Tree Ordinance (CLAOTO), Sections 22.56.2050–22.56.2260, protects oak trees that are at least 8 inches in diameter, as well as trees that have two trunks totaling at least 12 inches in diameter, as measured 4.5 feet above natural ground. A heritage oak, as defined by CLAOTO, is an individual of any species in the genus *Quercus* that measures 36 inches or more in diameter as measured 4.5 feet above natural ground, or any oak of 36 inches or less in diameter having a significant historical or cultural importance to the community. CLAOTO requires that all potential impacts to oak trees regulated by this ordinance be preceded by an application to the County that includes detailed Impact Sciences oak tree report (Impact Sciences 2009, Recirculated Draft EIR, **Appendix 4.4**). Mitigation for impacts to oak trees is usually required as a condition of an Oak Tree Permit issued by the County.

During 2005 and 2006, Impact Sciences surveyed/conducted an oak tree survey of the on-site oak trees occurring within 200 feet of the proposed grading limits (Impact Sciences 2009, Recirculated Draft EIR, Appendix 4.4). The survey identified 171 oaks potentially regulated by CLAOTO. The vast majority of the oaks on the site are coast live oak, but valley oaks (*Quercus lobata*), scrub oaks (*Q. berberidifolia*), and one MacDonald oak (*Q. x macdonaldii*) [a hybrid of a valley oak and a scrub oak] also occur. Of the 171 oaks, 28 are heritage oaks as defined by CLAOTO.

In addition, Public Resources Code section 21083.4 addresses oak woodlands conservation and contains the following three elements: (a) counties must determine whether a project may result in the conversion of oak woodlands; (b) if so, the county must determine if the conversion will have a significant impact on the environment; and (c) if there is a conversion, and it has a significant impact, the county must impose one or more of the following mitigation measures:

- (1) Conserve oak woodlands, through the use of conservation easements.
- (2) Plant an appropriate number of trees, including maintaining plantings and replacing dead trees.
 - (a) Maintain planted oak trees for seven years.
 - (b) The planting of oak trees shall not fulfill more than one-half of the mitigation requirement for the project.
- (3) Contribute funds to the Oak Woodlands Conservation fund.
- (4) Other mitigation measures developed by the County.

Public Resources Code 21083.4(a) defines “oak” as a “native tree species in the genus *Quercus*, not designated as Group A or Group B commercial species pursuant to regulations adopted by the State Board of Forestry and Fire Protection pursuant to Section 4526, and that is 5 inches or more in diameter at

breast height.” This statute does not provide a definition of “oak woodland,” but Public Resources Code § 12220(g) indicates that “forest land” is any “land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for mangment of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.”

Using Section 12220(g) as a guide, this EIR defines “oak woodland” as an area with at least 10% cover by oak trees with an understory of non-grass vegetation and at least 20% cover by oak trees with an understory of grass vegetation. Oak/grass includes areas where oak trees comprise between 10% and 20% of the total cover with an understory of grass vegetation. As part of the Vegetation Communities analysis, biologist surveyed the site and identified all oak woodlands meeting this definition. Note that these surveys not only captured the oak woodland habitat, but also the entire range of oak trees in terms of size and maturity, including all trees with trunk diameters of five (5) inches or more, measured at breast height, as required under Public Resources Code 21083.4(a). These surveys indicate that the project site supports 4.0 acres of oak woodland, as defined.

~~During 2005 and 2006, Impact Sciences conducted an oak tree survey of the on-site oak trees occurring within 200 feet of the proposed grading limits (Impact Sciences 2009, Recirculated Draft EIR, **Appendix 4.4**). The survey identified 171 oaks potentially regulated by CLAOTO. The vast majority of the oaks on the site are coast live oak, but valley oaks (*Quercus lobata*), scrub oaks (*Q. berberidifolia*), and one MacDonald oak (*Q. x macdonaldii*) [a hybrid of a valley oak and a scrub oak] also occur. Of the 171 oaks, 28 are heritage oaks as defined by CLAOTO.~~

c. Sensitive Plant Communities

The CDFG Wildlife and Habitat Data Analysis Branch has developed a *List of California Terrestrial Natural Communities*, which was used as the classification system for this document. The most recent version of this list, dated September 2003 (updated 2007, Recirculated Draft EIR, **Appendix 4.4**), is derived from the California Natural Diversity Database (CNDDDB) and is intended to supersede all other lists developed from the CNDDDB. It is based on the detailed classification put forth in *A Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995). It is also structured to be compatible with previous CNDDDB lists (e.g., Holland 1986).

Two of the primary purposes of the CNDDDB classifications are to assist in characterizing vegetation in a consistent manner and to identify rare and declining vegetation types. The ranking of natural communities by rarity or threat is an important facet of this system. For the purposes of this EIR, vegetation communities denoted on the October 2007 (CDFG 2007D) list as G1, G2, or G3 (high priority

for inventory) or otherwise regulated by local, state, and/or federal resource agencies are considered to have "special status."

Of the 21 vegetation communities and land covers occurring on the Project site, southern willow scrub, southern coast live oak riparian forest, and southern cottonwood–willow riparian are currently denoted as G1, G2, or G3 by CDFG (2007D) and, therefore, are considered special-status. In addition to those vegetation communities ranked as G1, G2, G3, riparian and wetland vegetation communities on site are considered special-status, including herbaceous wetland, river wash, alluvial scrub, arrow weed scrub, and mulefat scrub. Given the occurrence of *Artemisia tridentata* ssp. *parishii* (which is considered special-status by the County of Los Angeles) within the big sagebrush scrub community, this EIR treats big sagebrush scrub as a special-status vegetation community. Please see **Subsection 6, Biological Resources**, below, for a more detailed discussion of these plant communities and their distribution on the project site.

It should be noted that the Newhall Ranch Specific Plan Program EIR identified coastal sage scrub (coastal scrub) as a special-status plant community. However, this determination was based on a previous CDFG list of terrestrial natural communities, which has been superseded by the current *List of California Terrestrial Natural Communities*, dated September 2003 (updated 2007, Recirculated Draft EIR, **Appendix 4.4**). Consequently, coastal scrub is not considered of special-status in this EIR.

d. Special-Status Wildlife

Special-status wildlife species include those that are (1) state or federally listed as Threatened or Endangered, (2) proposed for listing as Threatened or Endangered, (3) designated as state or federal

**Table 4.4-6
Special-Status Wildlife Species Observed on or Adjacent to the Project Site**

Common Name Scientific Name	Status			Habitat Requirements	On-Site Status
	Federal	State	Other		
Insects (Butterflies)					
monarch butterfly (wintering sites) <i>Danaus plexippus</i>	—	***	—	Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, Monterey cypress), with nectar and water sources nearby.	Individual monarchs have been observed within the Newhall Ranch Specific Plan area (NRSP), including the High Country (Compliance Biology 2004A, 2005; Dudek and Associates 2006B) and Entrada (Compliance Biology 2004C); due to sites distance from coast, it is unlikely that the Project site would be used by large numbers of overwintering adults (Compliance Biology 2004A). Not expected to occur in Project site, Salt Creek area, or VCC.
San Emigdio blue butterfly <i>Plebulina emigdionis</i>	—	***	—	Often near streambeds, washes, or alkaline areas. Associated with four-wing saltbush (<i>Atriplex canescens</i>) and quail brush (<i>Atriplex lentiformis</i>).	A colony was observed in Potrero Canyon in NRSP in association with <i>Atriplex lentiformis</i> plants (Compliance Biology 2004A and 2005). Suitable habitat occurs within Salt Creek, VCC, and Entrada.
Mollusks					
<u><i>Purgulopsis castaicensis</i></u> n. sp. undescribed species of snail	—	—	—	Occupies groundwater-dependent spring, occurring on muddy and gravelly substrate and in water of depths up to several centimeters.	This species was observed on the NRSP in 2006 at the Middle Canyon Spring complex (Dudek 2007).
Fish					
Santa Ana sucker <i>Catostomus santaanae</i>	FT	CSC	--	Occupies small- to medium-sized perennial streams with water ranging in depth from a few centimeters to a meter or more.	This species is known to occur in the Santa Clara River and has been sparsely observed in the portion of the river within NRSP (CDFG 2007A; Impact Sciences 2003A), and within or adjacent to Entrada (SMEA 1995; Haglund and Baskin 2000; Impact Sciences 2003B). Population in the Santa Clara River system is not listed as threatened because it is introduced to the area. Not expected to occur in Salt Creek or VCC.

Common Name Scientific Name	Status			Habitat Requirements	On-Site Status
	Federal	State	Other		
unarmored threespine stickleback <i>Gasterosteus aculeatus williamsoni</i>	FE	CE, CFP	--	Slow-moving and backwater areas.	This species is known to occur in the Santa Clara River and has been observed evenly distributed in the portion of the river within NRSP (Aquatic Consulting Services 2002B, 2002C; Impact Sciences 2003A, 2003B; ENTRIX 2005) and within Entrada (Aquatic Consulting Services 2002D; SMEA 1995; Haglund and Baskin 2000; Impact Sciences 2003B). It was also observed in Castaic Creek (Haglund 1989).
arroyo chub <i>Gila orcutti</i>	—	CSC	--	Slow-moving or backwater sections of warm to cool streams with mud or sand substrates.	This species is known to occur in the Santa Clara River and has been observed abundantly in the portion of the river within NRSP (Aquatic Consulting Services 2002B, 2002C; Impact Sciences 2003A, 2003B; ENTRIX 2005), within Entrada (Aquatic Consulting Services 2002D; SMEA 1995; Haglund and Baskin 2000), and within VCC (Haglund 1989). Not expected to occur in Salt Creek.
Amphibians					
arroyo toad <i>Anaxyrus (Bufo) californicus</i>	FE	CSC	--	Restricted to rivers with shallow, gravely pools adjacent to sandy terraces that have a nearly complete closure of cottonwoods, oaks, or willows, and almost no herbaceous cover. Requires shallow pools with minimal current, little to no emergent vegetation and a sand or pea gravel substrate overlain with flocculent silt for egg deposition.	

Common Name Scientific Name	Status			Habitat Requirements	On-Site Status
	Federal	State	Other		
merlin (wintering) <i>Falco columbarius</i>	--	WL	LC	Coastlines, wetlands, woodlands, agricultural fields, and grasslands.	Several individuals observed on different occasions hunting over agriculture fields along the Santa Clara River and in Potrero Canyon (Bloom Biological 2008). A male and female were observed flying over agriculture fields bordering riparian habitat near Indian Dunes in the NRSP in March 2007 (Bloom Biological 2007A). Although this species does not nest in California, CDFG considers wintering birds to be of Special Concern.
prairie falcon (nesting) <i>Falco mexicanus</i>	BCC	WL	LC	Grasslands, savannas, rangeland, agricultural fields, and desert scrub; requires sheltered cliff faces for shelter and nesting.	At least two individuals were observed on several occasions in Potrero Canyon; and two other individuals were observed along the Santa Clara River on single occasions (Bloom Biological 2008). Individuals observed foraging within NRSP in 2000 (Guthrie 2000A), along Castaic Creek in 2001 (Guthrie 2001A), and Salt Creek in 2005 (Dudek and Associates 2006B); it was observed flying north over the NRSP on April 29, 2007 (Bloom Biological 2007A); all of these occurrences were thought to be migrants in the Project site; moderate potential to occur within Entrada. No nesting individuals have been observed and available nesting habitat is marginal.
American peregrine falcon <i>Falco peregrinus anatum</i>	BCC, Delisted	CE , CFP _ε <u>Delisted</u>	LC	Nests near wetlands, lakes, rivers, or other water bodies, on cliffs, banks, dunes, and other human-made structures.	One individual was observed on one occasion over Wolcott agriculture field (Bloom Biological 2008). An individual was observed foraging over the Santa Clara River corridor near the Grapevine Mesa area within NRSP in 2000 (Guthrie 2000B); no other occurrences of this species have been documented on site during annual bird surveys. No nesting peregrine falcons have been observed on the Project site. Moderate potential for foraging within NRSP, Salt Creek, VCC, and Entrada. The species may nest in the Santa Susana Mountains, south of the Project site (Guthrie 2000B).
California condor <i>Gymnogyps californianus</i>	FE, USBC	CE, CFP	—	Forages over wide areas of open rangelands, roosts on cliffs and in large trees and snags.	Until April 2008, California condors had not been known to nest or land within the Project area within the last 25 years (Bloom Biological 2007A, 2008). In April 2008, a California condor was observed feeding on a dead calf in a Potrero side canyon by wildlife biologist Chris Niemela (Carpenter 2008). <u>A condor was also directly observed in January 2009 in the Potrero Canyon area (Niemela 2009), and there have been other documented landings in the project area between April and July 2008 (Root 2008).</u> It is a wide-ranging species that nests on remote cliffs, but forages over hundreds of square miles and is known to at least fly over the site (Bloom Biological 2008).

Common Name Scientific Name	Status			Habitat Requirements	On-Site Status
	Federal	State	Other		
Allen's/ Rufous hummingbird (nesting) <i>Selasphorus sasin/rufus</i>	USBC/ USBC, BCC	***	ABC, LC, Aud	<u>Rufous hummingbird does not breed in project vicinity. Allen's hummingbird</u> breeds in coastal scrub, valley foothill hardwood, and valley foothill riparian habitats. <u>Both species</u> migrate in woodland and scrub habitats.	These species have been observed along the Santa Clara River within and adjacent to the NRSP (Bloom Biological 2008; Guthrie 1998A, 1999B, and 2004F), in the upland area of the Entrada site (Guthrie 2004G), and along Castaic Creek in VCC (Guthrie 2004B). <u>Most</u> These observations were thought to be of migrants, <u>but a few observations of Allen's hummingbird occurred in June and July and could have been breeding residents.</u> The Project site provides suitable foraging, nesting, and migrating habitat throughout the NRSP, Entrada and VCC. The Project site is within this species' year-long range.
chipping sparrow (nesting) <i>Spizella passerina</i>	--	***	LC	Open woodlands with sparse or low shrubs.	This species has been observed as a common migrant in the Project site (Bloom Biological 2007A); additional observations are within and adjacent to the NRSP near the Santa Clara River (Guthrie 1994B, 1997B, 1999B, and 2002A), near Grapevine Mesa (Guthrie 2000B) and Homestead Canyon (Guthrie 2004A), in Entrada (Guthrie 1991A, 1992, 1993A, and 1999A), and in VCC (Guthrie 1991B). Suitable habitat occurs on site, mostly in High Country with some open woodland areas in Potrero Canyon as well. The Project site is within this species' year-long range.
least Bell's vireo (nesting) <i>Vireo bellii pusillus</i>	FE, USBC, BCC	CE	ABC, NT, Aud	Riparian vegetation with extensive willows below 2,000 feet.	This species has been observed almost every year along the Santa Clara River within the NRSP, and over multiple years in Entrada and VCC. It has been observed nesting within NRSP and Entrada most recently in 2007 (Bloom Biological 2007A) during annual bird surveys; on-site nesting sites in willow riparian habitats associated with the Santa Clara River and Castaic Creek. Suitable nesting and foraging habitat present within NRSP, VCC, and Entrada.
yellow-headed blackbird <i>Xanthocephalus xanthocephalus</i>	--	CSC	LC	Nests in freshwater marsh and forages in annual grassland, native grassland and agriculture.	This species has been observed within the NRSP (Guthrie 1996B, 1997B, 1999B, 2001B), in Entrada (Guthrie 1988, 2000E), and in VCC (Guthrie 1997A, 2006C). All observations were thought to be migrants. While suitable nesting and foraging habitat occurs on the Project site, this species is expected to occur very rarely on site.

**Table 4.4-7
Special-Status Wildlife Species with Potential to Occur on the Project Site**

Common Name <i>Scientific Name</i>	Status			Habitat Requirements	Habitat Suitability
	Federal	State	Other		
<u>MOLLUSKS</u>					
<u>Trask shoulderband snail</u> <i>Helminthoglypta traskii traskii</i>	=	***		<u>The ecology and distribution of terrestrial land snails within Southern California, including shoulderband snails in most of Southern California, are poorly understood. The available literature indicates that Trask shoulderband snail occurs in areas supporting coastal scrub, riparian, and chaparral communities.</u>	<u>Surveys were conducted in the project area for this species from November 2009 to January 2010. Although surveys were negative for this terrestrial mollusk species, the presence of suitable microhabitats, such as a woodrat nests, decaying yucca, downed tree limbs and branches, and two other non-special-status shoulderband snail species— Southern California shoulderband snail and Vasquez rocks shoulderband snail— indicate that the Trask shoulderband potentially occurs in the project area (Huntley 2010).</u>
<u>FISH</u>					
southern steelhead <i>Oncorhynchus mykiss</i>	FE	—		As juveniles and for spawning: relatively cool freshwater streams, well oxygenated water with adequate depth and cover in the way of gravel, cobble, boulder, undercut banks, large and small woody debris, and overhanging vegetation. As non-spawning adults: Pacific Ocean.	Within the Santa Clara River drainage, southern steelhead historically inhabited Piru Creek, Sespe Creek, Santa Paula Creek, Hopper Creek, and possibly Pole Creek (Titus <i>et al.</i> n.d.). Presently, southern steelhead occur downstream of the proposed Project in the Santa Clara River watershed in Piru Creek between the confluence with the Santa Clara River and Santa Felicia Dam, in Sespe Creek, in Santa Paula Creek, and possibly in Hopper and Pole Creeks (Stoeker and Kelly 2005). Although reconnaissance surveys conducted along the Santa Clara River and tributary drainages within the Specific Plan area of the NRSP were negative in 2004 and 2005 (ENTRIX 2009), this species was included in this category (Potential to Occur on Site) due to potential downstream effects of the proposed Project.

(3) Special-Status Wildlife Species Not Expected or Rarely Occurring on the Project Site

The project site lacks suitable habitat to support the species addressed in **Table 4.4-8**, below, as resident or nesting species or is expected to only support the species on rare occasions, such as during migration. **Table 4.4-8** provides the species' regulatory status, habitat requirements, and an explanation of why the species is not expected to reside or substantially utilize the project site. If any of these species were observed during site surveys, they are listed in **Table 4.4-6**, above. As these species are not expected to breed, nest, or otherwise reside on or substantially utilize the project site, they are not discussed further in this document.

e. Jurisdictional Wetlands and Drainages

(1) Corps Jurisdiction

Wetlands, creeks, streams, and permanent and intermittent drainages are generally subject to the jurisdiction of the Corps under Section 404 of the federal Clean Water Act. The Corps has jurisdiction up to the "ordinary high water mark" of rivers, creeks, and streams that are considered "waters of the U.S." as defined by the Clean Water Act. If adjacent wetlands occur, the limits of jurisdiction extend beyond the ordinary high water mark to the outer edge of the wetlands. Wetlands are defined by Corps as "those areas that are inundated or saturated by surface or groundwater at a frequency or duration to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." (Corps 1987) The presence and extent of wetland areas are normally determined by examination of the vegetation, soils, and hydrology of a site. The Corps definition of wetlands requires that all three wetland identification parameters be met.

In 2003, URS staff completed field investigations and conducted a delineation of waters of the United States (but not wetlands) and CDFG jurisdictional streams present within the RMDP site, which encompasses the Landmark Village project site. The 2003 delineation was conducted using sub-meter accurate GPS units and the data were transferred into a GIS database. The URS December 2003 Jurisdictional Delineation report is found in Appendix 4.4 of this FEIR. The Corps' letter, dated February 4, 2004, concurring with the URS delineation also is attached in Appendix 4.4 of this FEIR. Between 2004 and 2009, URS completed multiple delineation efforts on the RMDP and Entrada sites in support of the EIS/EIR process for the RMDP/SCP project. These efforts resulted in subsequent mapping refinements to the jurisdictional boundaries (discussed below).

URS staff delineated Corps jurisdictional wetlands in 2007, which had not been delineated previously. The extent of wetlands within the site was determined through a combination of fieldwork and analysis of high-resolution (6" pixels) aerial photography. Wetlands were identified within the Santa Clara River

corridor and in the Potrero Canyon and Salt Creek drainages, as well as in a spring complex near the mouth of Middle Canyon. Where fieldwork was conducted, the wetland delineation was performed in accordance with the Corps' Wetland Delineation Manual (Environmental Laboratory, 1987) and the Arid West Regional Supplement (Corps, 2006).

In 2008, Glenn Lukos Associates conducted a field delineation of the limits of waters of the United States, Corps jurisdictional wetlands, and CDFG jurisdictional streams within the Entrada planning area. In addition to the Entrada planning area, the Glenn Lukos Associates study delineated jurisdictional drainages within the footprint of the extension of Magic Mountain Parkway extension. The Lukos delineation letter report, dated October 18, 2006 (as revised September 15, 2008), is attached in **Appendix 4.4** of this FEIR.

In 2009, URS prepared a preliminary jurisdictional determination encompassing the entire RMDP site and Entrada planning area. This report combined the results of previous studies conducted in 2003, 2006, 2007, and 2008 to produce a comprehensive, planning-level delineation. **Appendix 4.4** of this FEIR contains the URS preliminary jurisdictional determination, dated April 8, 2009. In addition, as part of the Draft EIS/EIR, URS compiled a "Composite Wetland Delineation" for the RMDP and Entrada sites; this composite delineation is also attached in **Appendix 4.4**.

Subsequent to release of the Draft EIS/EIR in April 2009, the Corps and CDFG received comments from the public regarding the boundary of a riparian area along the Santa Clara River mainstem near the proposed site for the Potrero Canyon Bridge. In the 2009 preliminary composite wetlands delineation, this area had been previously surveyed for wetlands by interpreting aerial photographs. To address these comments, additional wetland delineation field work was performed in this location. In addition, the boundaries of waters of the United States and wetlands at some other locations were refined to reflect the most recent data available (generally, 2006 data replacing 2004 data). A revised preliminary Jurisdictional Determination was submitted to the Corps on June 7, 2010. This Jurisdictional Determination is found in **Appendix 4.4** of this FEIR.

~~A jurisdictional delineation of "waters of the U.S." associated with the Santa Clara River and Chiquito Canyon Creek within the Specific Plan was conducted by URS in 2003 in accordance with Corps protocol. (URS 2003, Recirculated Draft EIR, **Appendix 4.1**.) Castaic Creek was not delineated at that time. The jurisdictional delineation conducted by URS (December 2003) for the proposed project (as well as the greater Newhall Ranch Specific Plan Area) was verified by the Corps on February 4, 2004. The Corps verification was based on the review of the Jurisdictional Delineation Permit Package submitted by URS (December 15, 2003), as well as on site visits conducted on August 7, August 19, and October 27, 2003.~~

The Landmark Village tract map site is generally bordered to the east by Castaic Creek, to the south by the Santa Clara River and to the west by Chiquito Canyon Creek. As shown in **Figure 4.4-6, Jurisdictional Resources**, below, portions of Chiquito Canyon Creek and the Santa Clara River are within the project boundaries, as are portions of Castaic Creek. All of these drainages are considered to be under Corps jurisdiction. Additionally, portions of five seasonal tributaries of the Santa Clara River, one seasonal tributary of Chiquito Canyon Creek, and two agricultural drainages located on the project site have been determined to be under the jurisdiction of the Corps. The preliminary Jurisdictional Delineation conducted by URS indicated a total of 13.4 acres on the project site under the jurisdiction of the Corps. Based on an interpretation of an aerial photograph of the site, it is estimated that approximately 1.7 acres of Castaic Creek occur within the project boundary, just north and south of SR-126, and are expected to be under Corps jurisdiction, for a total estimated 15.1 acres of Corps jurisdiction within the project site boundary. There are no other features within the proposed project boundaries that are under the jurisdiction of the Corps.

(2) CDFG Jurisdiction

Streambeds within the project site are subject to regulation by CDFG under Section 1602 of the California Fish and Game Code. A stream is defined under these regulations as a body of water that flows at least periodically or intermittently through a bed or channel having banks, and that supports fish or other aquatic life. In many cases, CDFG's jurisdiction overlaps substantially with the Corp's jurisdiction.

According to the URS preliminary Jurisdictional Delineation (~~URS 2003, Recirculated Draft EIR, Appendix 4.4 of this FEIR~~), CDFG jurisdiction on the project site encompasses the 15.1 acres under Corps jurisdiction. (See **Figure 4.4-6**, below). However, because CDFG also has jurisdiction over all riparian vegetation associated with creeks, drainages, and rivers, there is an additional 53.3 acres of riparian vegetation on the site under CDFG jurisdiction. The Landmark Village applicant is seeking approval of a Section 404 Permit from the Corps and a Master 1600 Agreement from the CDFG for the Newhall Ranch Specific Plan area, including the Landmark Village project site. The draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) has been released for public review in April 2009. For further information concerning the EIS/EIR Project, please refer to **Topical Response 2: EIS/EIR Project** of the Landmark Village Final EIR (November 2007) as well as Subsection (3) immediately following.

(3) RMDP/SCP Project

As noted in Section 1.0, Project Description, certain permits and approvals from agencies other than the County are needed to implement various project components. These agencies include the Corps and CDFG, the Regional Water Quality Control Board and U.S. Fish and Wildlife Service. Many of these additional approvals are part of the project applicant's Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan (RMDP/SCP) project and related joint EIS/EIR (discussed below).

The RMDP/SCP is a separate but related project that encompasses the Newhall Ranch Specific Plan area (including Landmark Village) and two planning areas in the Specific Plan's immediate vicinity, the Valencia Commerce Center (VCC) and Entrada. The RMDP/SCP Project consists of two components. The first is the proposed RMDP, which is a conservation, mitigation, and permitting plan for sensitive biological resources within the previously approved Newhall Ranch Specific Plan area. The RMDP would be relied upon to obtain federal and state permits to implement infrastructure improvements required to facilitate buildout of the approved Specific Plan. The RMDP is intended to direct both resource management and development on the Specific Plan site. The second component is the SCP, which is a conservation and management plan to permanently protect and manage a system of preserves designed to maximize the long-term existence of the San Fernando Valley spineflower (*Chorizanthe parryi* ssp. *fernandina*; spineflower or SFVS), a federal candidate and a state-listed endangered plant species. The SCP would address known spineflower located within the Specific Plan area and the two planning areas, VCC and a portion of Entrada.

The joint EIS/EIR has been prepared to assess the environmental implications of implementing the RMDP/SCP project, with the Corps acting as the lead agency under the NEPA and the CDFG acting as the lead agency under CEQA. The joint EIS/EIR is available for public review at CDFG's website: <http://www.dfg.ca.gov/regions/5/newhall/docs/>.

The Draft EIS/EIR for the RMDP/SCP project was publicly circulated by the Corps and CDFG on April 27, 2009, and the public comment period closed on August 25, 2009 (after an extension). The Final EIS/EIR for the RMDP/SCP project was released for additional public review/comment on June 18, 2010. This additional review period for the Final EIS/EIR began on June 19, 2010 and ended on August 3, 2010 (after an extension). The total public review period on the Final EIS/EIR was 45 days. On December 3, 2010, CDFG approved the RMDP/SCP and the EIR portion of the environmental documentation. It also approved the associated Streambed Alteration Agreement and Incidental Take Permits requested by the applicant. The Corps is still reviewing the RMDP/SCP, and is expected to render a decision on the project and the EIS sometime in the next year. County staff has been monitoring, and will continue to monitor,

the processing of the Landmark Village proposed project, as well as the RMDP/SCP project as it works its way through the Corps' permitting process.

f. Characteristics of Surrounding Areas

Plant communities in the immediate vicinity of the Landmark Village project site include coastal scrub, coast live oak woodland, valley oak/grass, undifferentiated chaparral, big sagebrush scrub, alluvial scrub, California annual grassland, southern cottonwood-willow riparian, southern willow scrub, and mulefat scrub.

this plant community as part of its analysis of the overall loss of wildlife habitat (**Subsection 9.b.1.(b), Wildlife Habitat Loss**).

Scrub and chaparral (30.000.00)

Coastal Scrub (32.000.00)

The proposed project would result in the permanent and temporary conversion of 156~~5.57~~ and 27.0 acres of coastal scrub and alliances/associations, respectively, as follows:

- **California Sagebrush Scrub (32.010.00)** (~~not mapped to the association level~~): ~~70.961.8~~ acres permanently converted, 18.~~37~~ acres temporarily converted.
- **California Sagebrush Scrub-Purple Sage (32.010.04)** (~~not mapped to the association level~~): ~~62.48.5~~ acres permanently converted, ~~18.30.0~~ acres temporarily converted.
- **California sagebrush** (association of California Sagebrush Scrub, dominated only by California sagebrush) (32.010.01): 0.0 acres permanently converted, 0.4 acres temporarily converted.
- **California Sagebrush-Black Sage Scrub (32.120.00)**: 1.0 acre permanently converted, 5.0 acres temporarily converted.
- **California Sagebrush—California Buckwheat Scrub (32.110.00)**: 22.8 acres permanently converted, 3.3 acres temporarily converted.
- **California Sagebrush Scrub—Undifferentiated Chaparral** (modified from 32.300.00 Coastal Sage Chaparral Scrub): 61.~~68~~ acres permanently converted, 0.0 temporarily converted.

Given the acreage that would be removed and the habitat value this plant community provides for common and special-status plant and wildlife species, the impacts on coastal scrub and alliances/associations, described above, would be significant. Additionally, the Newhall Ranch Specific Plan Program EIR previously identified a significant unavoidable impact to coastal sage scrub habitat. Note that the Newhall Ranch Specific Plan Program EIR identified coastal sage scrub (coastal scrub) as a special-status plant community. However, this determination was based on a previous CDFG list of terrestrial natural communities, which has been superseded by the current *List of California Terrestrial Natural Communities*.¹² In this new list, coastal sage scrub is not identified as a special-status plant community, although it remains important at a watershed level because it provides habitat for a variety of special-status species and is addressed as such in this EIR. The magnitude of impacts to this plant community would be reduced by:

- ~~implementation of RMP Mitigation Measures SP 4.6-37 through SP 4.6-42 (which would protect 1,311 acres of coastal scrub in the High Country SMA/SEA 20),~~

¹² CDFG, "List of California Terrestrial Natural Communities."

- ~~implementation of additional proposed Mitigation Measures LV 4.4-2 (preservation of 156.5 acres of coastal scrub off site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Landmark Village), and~~
- ~~protection of the Salt Creek Area (which contains 631 acres of this habitat type).~~

Following development, the continued preservation of this vegetation community would be accomplished through restricted access, long-term management, and dedication of the River Corridor SMA, High Country SMA, and Salt Creek area as described in the following: (a) Mitigation Measures SP-4.6-17 (standards for trail design and limitations on human and pet access to the River Corridor SMA) and SP-4.6-18 and SP-4.6-19 (transition areas along the River Corridor SMA); (b) the Specific Plan's condition requiring dedication of the Salt Creek Area (which contains 631 acres of this habitat type); and (c) Mitigation Measures SP-4.6-21 through SP-4.6-26 (Open space dedication of the River Corridor SMA), SP-4.6-36 through SP-4.6-42 (Open space dedication of the River Corridor SMA and the High Country SMA). Long-term management activities also would include a reduction in cattle grazing except where grazing may be used as a management tool to control exotics, and the management of exotic species within restoration areas associated with the RMDP as described in Mitigation Measure SP-4.6-27 (removal of grazing and enhancement of riparian habitat in the High Country SMA).

In addition, the following new measures included in this EIR would further reduce impacts to coastal sage through additional preservation:

- LV 4.4-2 (preservation of 155.7 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Landmark Village); ~~Five additional mitigation measures include long term management measures for the benefit of the preserve areas:~~
- LV 4.4-49 (permanent fencing along trails in the River Corridor SMA);
- LV 4.4-57 (requires the enhancement of the existing agricultural undercrossing at SR-126);
- LV 4.4-58 (trail signage and homeowner education regarding sensitive resources in preserved natural habitat areas);
- LV 4.4-59 (requires the supplemental restoration/enhancement of coastal scrub in High Country SMA, Salt Creek area, and River Corridor SMA).

These measures provide additional mechanisms to ensure the dedication and management of natural lands and open space to mitigate the proposed project's effects on coastal scrub vegetation communities for the benefit of common and special-status wildlife species. These areas support the same types of habitat that would be lost through construction and would be further enhanced through management and monitoring activities. These mitigation measures will reduce impacts to this vegetation type to a level that is less than significant.

**Table 4.4-9
Plant Community/Land Use Impact Summary**

General Physiognomic and Physical Location	General Habitat Type	Floristic Alliance	Association	Total Acres present	Acres Developed	Acres Temporarily Disturbed	Total Acres Developed or Disturbed	Percent Acres Developed or Disturbed
Grass and Herb Dominated Communities (40.000.00)	Non-Native Grassland (42.000.00)	California annual grassland (42.040.00)	Not mapped to association level	52.7	38.8	13.9	52.7	100%
Scrub and Chaparral (30.000.00)	Coastal Scrub (32.000.00)	California sagebrush scrub (32.010.00)	Not mapped to association level	80.17	61.824	18.3	80.7	100%
			California sagebrush– <i>Artemisia californica</i> (32.010.01)	0.4	0.0	0.4	0.4	100%
			California sagebrush–purple sage (32.010.04)	8.5	8.5	0.0	8.5	100%
		California sagebrush–black sage scrub (32.120.00)	California sagebrush–black sage	6.0	1.0	5.0	6.0	100%
		California sagebrush–California buckwheat scrub (32.110.00)	Not mapped to association level	26.1	22.8	3.3	26.1	100%

General Physiognomic and Physical Location	General Habitat Type	Floristic Alliance	Association	Total Acres present	Acres Developed	Acres Temporarily Disturbed	Total Acres Developed or Disturbed	Percent Acres Developed or Disturbed
		California sagebrush scrub–undifferentiated chaparral (32.300.00)	Not mapped to association level	61.68	61.86	0.0	61.86	100%
		Not mapped to alliance level	Not mapped to association level	47.2	46.8	0.4	47.2	100%
	Undifferentiated Chaparral Scrubs (37.000.00)	Chamise chaparral (37.101.00)	Not mapped to association level	1.2	1.2	0.0	1.2	100%
	Chaparral with Chamise (37.100.00)	Coast live oak forest and woodland (71.060.00)	Coast live oak woodland (71.060.19)	32.4	32.43	0.01	33.4	100%
	Oak Woodland and Forest (71.000.00)							
Riparian and Bottomland Habitat (60.000.00)		Herbaceous wetland	Not mapped to association level	3.5	0.4	3.1	3.5	100%
	Other Riparian/ Wetland	River wash	Not mapped to association level	15.2	2.5	12.7	15.2	100%
		Alluvial scrub	Not mapped to association level	0.5	0.0	0.5	0.5	100%
		Big sagebrush scrub (35.110.00)	Not mapped to association level	12.2	2.2	10.0	12.2	100%

Undifferentiated Chaparral Scrubs (37.000.00)

The proposed project would result in the permanent and temporary conversion of 46.8 and 0.4 acres of undifferentiated chaparral scrubs, respectively.

This plant community is a dominant natural vegetation type in the region and is not considered a sensitive natural community in Southern California by resource agencies. Given the small amount of acreage that would be removed, and the common nature of this plant community in the project region, the proposed project would have a less-than-significant impact on this plant community. The Newhall Ranch Specific Plan Program EIR included the impacts to this plant community as part of the analysis of the overall loss of wildlife habitat (**Subsection 9.b.(1)(b), Wildlife Habitat Loss**).

Chaparral with Chamise with or without codominant shrubs (37.100.00)

Chamise Chaparral (37.101.00). – 1.2 acres permanently converted, 0.0 acre temporarily converted

This plant community is a dominant natural vegetation type in the region and is not considered a sensitive natural community in Southern California by resource agencies. Given the small amount of acreage that would be removed, and the common nature of this plant community in the project region, the proposed project would have a less-than-significant impact on this plant community. The Newhall Ranch Specific Plan Program EIR included the impacts to this plant community as part of the analysis of the overall loss of wildlife habitat (**Subsection 9.b.(1)(b), Wildlife Habitat Loss**).

Broad leafed upland tree dominated (70.000.00)

Coast Live Oak Woodland (71.060.19). The proposed project permanently convert 23.43 acres of coast live oak woodland (~~0.1 acre~~ temporary impacts are anticipated). Coast live oak woodlands are a significant biological resource because they provide nesting and roosting habitat for a number of special-status species (including raptors), nesting habitat and food sources for a number of common wildlife species, and provide general cover for a number of larger mammal species. For these reasons, the removal of coast live oak woodland is considered to be a significant impact. Implementation of proposed Mitigation Measures LV 4.4-6 and LV 4.4-7 (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation and temporary fencing of protected oak trees) would reduce impacts to coast live oak woodland to a less than significant level. The Newhall Ranch Specific Plan Program EIR included the impacts to this plant community as part of its analysis of the overall loss of wildlife habitat (**Subsection 9.b.1.(b), Wildlife Habitat Loss**).

Man-Made Land Cover Types

Agriculture. The proposed project would result in the permanent conversion of 357.9 acres of land currently used for agricultural purposes. An additional 70.2 acres would be temporarily disturbed by bank stabilization and/or haul roads, but would be revegetated to its natural condition following completion of construction. Given that this area is already disturbed, and that this land cover type is not considered a natural community by resource agencies, the proposed project would have a less-than-significant impact on agricultural land. The Newhall Ranch Specific Plan Program EIR included the loss of this land cover as part of the analysis of the overall loss of wildlife habitat (**Subsection 9.b.1.(b), Wildlife Habitat Loss**).

Developed Land. The proposed project would result in the permanent and temporary conversion of 9.1 and 2.0 acres of developed land, respectively. Because developed land provides little, if any, wildlife habitat value, the permanent and temporary conversion of 11.1 acres of developed land would be a less-than-significant impact.

Disturbed Land. The proposed project would result in the permanent conversion of 83.2 acres of disturbed land. An additional 165.8 acres would be temporarily disturbed by bank stabilization and/or haul roads, but would be revegetated following completion of construction. Because disturbed land provides little, if any, wildlife habitat value, the permanent and temporary conversion of 249.0 acres of disturbed land would be a less-than-significant impact. The Newhall Ranch Specific Plan Program EIR included the loss of this plant community as part of its analysis of the overall loss of wildlife habitat (**Subsection 9.b.1.(b), Wildlife Habitat Loss**).

(b) Wildlife Habitat Loss

(i) Riparian Habitat

The proposed project would result in the permanent conversion of 22.4 acres of riparian habitat, including 4.9 acres of southern cottonwood-willow riparian, 0.4 acre of herbaceous wetland, 5.1 acres of arrow weed scrub, 6.9 acres of mulefat scrub, 2.5 acres of river wash, 2.2 acres of big sagebrush scrub, and 0.4 acre of big sagebrush scrub – California buckwheat. An additional 65.5 acres of riparian habitat would be temporarily disturbed by bank stabilization and/or haul roads, but would be revegetated with native plants following completion of construction activities. As summarized in **Tables 4.4-5** and **4.4-6**, the riparian habitat on the Landmark Village project site (and the greater Newhall Ranch Specific Plan Area) provides habitat for numerous special-status wildlife species, as well as being designated critical habitat for least Bell's vireo and arroyo toad. Given the amount of riparian habitat to be developed or temporarily disturbed, the loss of habitat for riparian-associated wildlife species would be a significant impact absent mitigation. Implementation of the following mitigation measures would replace any riparian vegetation temporarily or permanently removed:

- RMP Mitigation Measures **SP 4.6-1** through **SP 4.6-16** (habitat restoration/enhancement in the River Corridor SMA/SEA 23),
- RMP Mitigation Measure **SP 4.6-17** (standards for trail design and limitations on human and pet access to the River Corridor SMA/SEA 23),
- RMP Mitigation Measures **SP 4.6-18** and **SP 4.6-19** (transition areas along the River Corridor SMA/SEA 23),
- RMP Mitigation Measure **SP 4.6-20** (marking and inspection of grading perimeters; avoiding inadvertent impacts to riparian resources in the River Corridor SMA/SEA 23),
- RMP Mitigation Measures **SP 4.6-21** through **SP 4.6-26** (open space dedication of the River Corridor SMA/SEA 23),
- Proposed Mitigation Measure **LV 4.4-1** (development of a conceptual wetlands mitigation plan),
- Proposed Mitigation Measure **LV 4.4-15** (restriction of construction activities in the riverbed to specified areas),
- Proposed Mitigation Measure **LV 4.4-28** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation), ~~and~~
- Proposed Mitigation Measures **LV 4.4-29** through **LV 4.4-41** (wetlands mitigation plan and riparian restoration activities on the Project site) ~~, and~~
- Proposed Mitigation Measure **LV 4.4-63** (mitigation program shall incorporate applicable principles in the interagency Federal Guidance for the Establishment, Use, and Operation of Mitigation Banks (60 FR 58605–58614)).
- Proposed Mitigation Measure **LV 4.4-64** (project design features, construction notes, erosion and dust control, and SWPPP BMPs to ensure protection of vegetation communities and special-status species).

Additionally, the River Corridor SMA/SEA 23 (totaling 977.5 acres) would be protected in perpetuity. Combined, these measures would reduce the project impacts to below a level of significance. This finding is consistent with the findings of the Newhall Ranch Final Additional Analysis (May 2003).

(ii) Upland Habitat

The proposed project would permanently convert 686.8 acres of upland wildlife habitat into developed uses, including 357.9 acres of agricultural land, 38.8 acres of California annual grassland, ~~23.4~~ 23.4 acres of coast live oak woodland, ~~1565.57~~ 1565.57 acres of coastal scrub and alliances and associations, 46.8 acres of undifferentiated chaparral scrubs, 1.2 acres of chamise chaparral, and 83.2 acres of disturbed land (see **Subsection 9.b.(1)(a), Common Plant Communities, and 9.b.(1)(i) Sensitive Plant Communities**). An additional 277.3 acres of upland habitat would be temporarily disturbed during construction but would be revegetated with native plants following completion of construction activities. While these upland

plant communities vary in botanical value, each provides habitat for a multitude of wildlife species. When viewed in isolation, the impacts on a single plant community within the project site may not represent a substantial loss of wildlife habitat. However, as most wildlife species depend on a variety of habitat types to meet various ecological and life history requirements (i.e., food, shelter, nesting), the project's impact on habitat provided by these upland plant communities, when considered as a whole, is substantial. To address this potential impact, the Newhall Ranch Specific Plan Program EIR and this EIR recommend mitigation measures which, when implemented, will result in a large, permanent open space system that will conserve habitat for numerous upland-associated common and special-status wildlife species, including silvery legless lizard, rosy boa, San Bernardino ringneck snake, coast horned lizard, coast patch-nosed snake, northern harrier, white-tailed kite, southern rufous-crowned sparrow, Bell's sage sparrow, western burrowing owl, San Diego desert woodrat, pallid bat, and San Diego black-tailed jackrabbit. (See **Subsection 9.b.(1)(h), Special-Status Wildlife Species**, for a discussion of direct impacts to these species.) A total of 6,113 acres of potential habitat will be protected and managed, in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Therefore, after mitigation, the loss of 686.8 acres of currently undeveloped upland habitat would be adverse but not significant.

This finding is not consistent with the findings of the Newhall Ranch Program EIR, which identified the loss of wildlife habitat as a significant unavoidable impact; however, the mitigation proposed in the Specific Plan EIR was not as extensive as this Recirculated Draft Landmark Village EIR, in which additional measures have been added.

- The Newhall Ranch Specific Plan Program EIR identified several mitigation measures that would mitigate permanent and temporary impacts to habitat for general wildlife. The following previously incorporated mitigation measures will reduce impacts to wildlife habitat: **SP 4.6-21** through **SP 4.6-26** (open space dedication of the River Corridor SMA/SEA 23); **SP 4.6-27** (removal of grazing and enhancement of riparian habitat in the High Country SMA/SEA 20); **SP 4.6-28** (mitigation banking for various habitat types in the High Country SMA/SEA 20); **SP 4.6-17** (standards for trail design and limitations on human and pet access to the River Corridor SMA/SEA 23); **SP 4.6-29** (recreational usage and access restrictions within the High Country SMA/SEA 20); **SP 4.6-33** (protection of transition areas along the High Country SMA/SEA 20, including planting palettes and FMZs); **SP 4.6-20**, **SP 4.6-34**, and **SP 4.6-35** (guidelines for grading activities in the River Corridor SMA/SEA 23 and the High Country SMA/SEA 20); **SP 4.6-36** through **SP 4.6-42** (open space dedication of the High Country SMA/SEA 20); **SP 4.6-43** (Open Area use for mitigation of riparian or oak resources or elderberry scrub); and **SP 4.6-48** (restoration and enhancement of oak resources in the High Country SMA/SEA 20 and Open Area).
- This EIR recommends additional mitigation measures that would help reduce significant impacts to general wildlife individuals and upland habitat: **LV 4.4-2** (preservation of 1556.57 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Landmark Village); **LV 4.4-6** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and **LV 4.4-62** (dedication to the public of at least 1,900

acres of Open Area through out the Specific Plan area (including the Mission Village project site) to a NLMO).

- This EIR recommends a mitigation measure that ensures that impacts to nesting birds, including adults, nests, eggs, nestlings, and fledglings, do not occur during construction activities, in accordance with the Migratory Bird Treaty Act (MBTA): LV 4.4-21 (pre-construction surveys for nesting native bird species and construction setbacks for active nests).

Implementation of these mitigation measures would reduce impacts to upland habitat to a level that is adverse, but not significant.

(c) Buffers/Setbacks from Riparian Resources

The structural diversity of the various riparian and aquatic vegetation communities in the Santa Clara River drainage provides habitat for a large variety of wildlife species, including a number of special-status bird species. Each of these species has differing home range and natural history requirements. While some species are riparian-obligate (i.e., satisfy their forage, cover, and breeding habitat needs almost entirely within riparian vegetation communities), other species utilize both the riparian habitat as well as adjacent upland vegetation as part of their home range. A number of studies have found that even the more riparian-dependent wildlife species also require adjacent upland habitats to meet home range foraging and breeding requirements (Doyle 1990; Schaefer and Brown 1992), indicating that the overall viability of riparian associated wildlife species extends beyond the riparian canopy and includes adjacent upland habitat.

However, the characteristics, quality, and extent of upland habitat necessary to protect the diversity of wildlife species dependent upon riparian habitat may differ depending on the geographic region and the particular requirements of the riparian species to be protected. A study conducted by Impact Sciences (1997) along the Santa Clara River recommended preserving (and restoring, if necessary) a buffer or setback of at least 100 feet of high quality upland habitat (upland preserve zone), as measured from the outer edge of the riparian habitat associated with the Santa Clara River (“resource line”). This upland preserve zone would provide adequate forage and breeding habitat for riparian-associated bird and small mammal species and would help maintain species diversity within the riparian ecosystem, inclusive of the riparian/upland ecotone. The conclusions of this study were partially based on focused bird surveys (1,100 man-hours over a 62-calendar-day period) and small mammal trapping (a total of 1,210 cumulative trap nights were conducted).

Note also that the proposed 100-foot upland preserve zone is consistent with CDFG (Northern California-North Coast [Region 1]) buffer criteria for avoiding significant impacts to riparian species and habitats adjacent to urban development (CDFG 2001).¹³ In developing the buffer criteria, CDFG stated that

¹³ Please see Appendix A of the Final Landmark Village EIR for the CDFG (Northern California-North Coast, Region 1) buffer criteria.

This buffer analysis does not presume that the project's indirect effects on sensitive biological resources in the river corridor will be avoided completely. Therefore, in combination with the 100-foot setback, the Specific Plan's Resource Management Plan provides standards by which biological resources will be managed during construction and for the life of the community, including provisions for (1) restoration and enhancement of disturbed areas; (2) restrictions on pedestrian and vehicular access to the river corridor; (3) design standards for transition areas between development and the river; (4) conveyance of conservation easements; and (5) preparation of a financial plan and the long-term management of the riparian resources by the Center for Natural Lands Management.

As stated above, the Landmark Village project would maintain a 100-foot setback between the top of the bank and proposed residential, mixed-use, and commercial development. Based on the site-specific analysis conducted, the Landmark Village buffer is consistent with the approved Specific Plan. Again, however, the 100-foot-wide buffer will not eliminate the potential for indirect effects. Specific to the Landmark Village project, potential long-term indirect effects are analyzed below, including increases in (1) pesticides, herbicides, and pollutants; (2) lighting and glare impacts on wildlife species; (3) non-native plant and wildlife species; and (4) human activity and domestic pets. The Project Design Features (PDFs) and mitigation measures to reduce these potential indirect impacts are also discussed below.

PDFs to address urban runoff from irrigation and stormwater include site design, source control, treatment control, and hydromodification control Best Management Practices (BMPs). Stormwater runoff from all urban areas within the Landmark Village project will be routed to bioretention areas, vegetated swales, and/or extended detention basin treatment controls BMPs. The effectiveness of these water quality PDFs was analyzed by GeoSyntec Consultants.¹⁴

The mitigation measures to address the other identified potential indirect effects include previously incorporated measures from the Newhall Ranch Specific Plan Program EIR, and additional measures recommended by this EIR. Significant impacts related to buffers and edge effects and mitigation measures to reduce the level of impact include:

- Restriction of Wildlife Habitat Linkages – mitigated by previously incorporated Mitigation Measure **SP 4.6-18** (provision of transition areas adjacent to the River Corridor SMA/SEA 23).
- Increased Light and Glare – mitigated by previously incorporated Mitigation Measure **SP 4.6-56** (downcast lighting design along the boundaries of natural areas).
- Increase in Populations of Non-Native Plant and Wildlife Species – mitigated by the Landmark Village EIR Mitigation Measures **LV 4.4-44** (review of plant palettes and inspection of container

¹⁴ GeoSyntec Consultants. September 2006. *Landmark Village Water Quality Technical Report* (see Draft EIR, Appendix 4.43).

- Mitigation Measures **SP 4.6-37** through **SP 4.6-42** (long-term management of the High Country SMA/SEA 20), and
- Mitigation Measures **SP 4.6-53** and **SP 4.6-59** (requires current, updated, site-specific surveys for special-status species in consultation with CDFG).

This impact would also be reduced through the implementation of the following:

- Mitigation Measure **LV 4.4-5** (requires the *Draft RMDP Slender Mariposa Lily Mitigation and Monitoring Plan* (see Landmark Village Final EIR (November 2007), Appendix A) to be implemented by the applicant. The plan shall be subject to the approval of the County prior to the issuance of a grading permit.
- Mitigation Measure **LV 4.4-18** (requires a qualified biologist to conduct a Workers Environmental Awareness Program (WEAP) for all construction/contractor personnel and to provide guidance to construction/contractor personnel regarding environmental/permit regulations and mitigation measures.)

This impact would also be reduced through the implementation of Mitigation Measure **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. Given the availability of suitable mitigation sites, implementation of proposed Mitigation Measure **LV 4.4-5** (implementation of an approved slender mariposa lily mitigation plan) (see **Subsection 10, Project Mitigation Measures**, below) would further reduce impacts to this species to below a level of significance. The finding that impacts to this species can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR and Additional Analysis.

Mainland cherry. The mainland cherry has no state or federal sensitivity status, but it is locally protected through the County of Los Angeles. On site, this species is found as an occasional component of undifferentiated chaparral, big sagebrush scrub, and river wash. Given the low sensitivity status of the species, observations were not mapped. Implementation of the proposed project would result in the permanent loss of approximately 5 acres (17%) and temporary disturbance of approximately 23 acres (83%) of habitat for this species within the Landmark Village project site. Approximately 249 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Because the loss of mainland cherry shrubs and trees would conflict with local policies and ordinances protecting biological resources, the project's impacts on this species would be significant absent mitigation.

In order to reduce direct impacts to this species, the applicant would implement a series of mitigation measures designed to replace impacted mainland cherry trees and shrubs, and restore, enhance, and maintain natural woodland communities in perpetuity, consistent with the Newhall Ranch Specific Plan

Oak Resources Replacement Program (2003). Applicable mitigation measures include the following previously incorporated measures:

- Mitigation Measures **SP 4.6-1** through **SP 4.6-16** and **SP 4.6-21** through **SP 4.6-26** (habitat restoration, enhancement, and preservation of the River Corridor SMA/SEA 23);
- Mitigation Measure **SP 4.6-17** (restrictions on human and pet access to the River Corridor SMA/SEA 23);

- Mitigation Measures **SP 4.6-18** and **SP 4.6-19** (establishment of transition areas between the River Corridor SMA/SEA 23 and development);
- Mitigation Measure **SP 4.6-28** (mitigation banking for riparian habitats);
- Mitigation Measures **SP 4.6-29** through **SP 4.6-32** (recreation and access restrictions within the High Country SMA/SEA 20)
- Mitigation Measure **SP 4.6-33** (protection of transition areas between the development edge and the High Country SMA/SEA 20);
- Mitigation Measures **SP 4.6-34** and **SP 4.6-35** (clear marking of grading perimeters and avoidance of inadvertent impacts to biological resources outside the grading area within or adjacent to the High Country SMA/SEA 20);
- Mitigation Measures **SP 4.6-37** through **SP 4.6-42** (long-term management of the High Country SMA/SEA 20);
- Mitigation Measures **SP 4.6-43** through **SP 4.6-47** (acceptable uses of and long-term management of the Open Area);
- Mitigation Measure **SP 4.6-48** (standards for the restoration and enhancement of mainland cherry resources); and
- Mitigation Measure **SP 4.6-61** (site-specific survey for mainland cherry at County request).

This impact would also be reduced through the implementation of the following:

- Mitigation Measure **LV 4.4-1** (development of a conceptual wetlands mitigation plan);
- Mitigation Measure **LV 4.4-6** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation);
- Mitigation Measure **LV 4.4-15** (restriction of construction activities in the riverbed to specified areas);
- Mitigation Measure **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities);
- Mitigation Measures **LV 4.4-29** through **LV 4.4-41** (wetlands mitigation plan and riparian restoration activities on the Project site);
- Mitigation Measure **LV 4.4-2** (preservation of 155.7 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Landmark Village dedication of the Salt Creek area to the public); and
- Mitigation Measure **LV 4.4-53** (replacement of mainland cherry trees or shrubs outside riparian areas).

Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Island mountain-mahogany. The island mountain-mahogany is a CNPS List 4 (S3.3) plant, but it has no federal status. Within the project site, island mountain-mahogany occurs as an occasional component of chaparral communities at the base of north-facing slopes. Given the low sensitivity status of the species, observations were not mapped. Implementation of the proposed project would result in the permanent loss of approximately 110 acres (100%) of habitat for this species within the Landmark Village project site. Approximately 1,496 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

Because of the common occurrence of Peirson's morning-glory within the Newhall Ranch Specific Plan area, and because CNPS List 4 plants are not considered Rare from a statewide perspective, are not defined as Rare, Threatened, or Endangered pursuant to the California Endangered Species Act, are not eligible for state listing as Threatened or Endangered, and the vulnerability or susceptibility to threats on a statewide basis are considered low at this time (CNPS 2004), the loss of Peirson's morning-glory would not be considered a substantial adverse effect on a special-status species. Nor would it be expected to reduce regional populations of the species to below self-sustaining numbers. Therefore, impacts to island mountain-mahogany would be less than significant. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR and Additional Analysis, which found that impacts to this species would not be significant assuming implementation of Specific Plan Mitigation Measures **SP 4.6-27** (removal of grazing and enhancement of riparian habitat in the High Country SMA/SEA 20), **SP 4.6-34** (marking and inspection of grading perimeters prior to impacts within or adjacent to the High Country SMA/SEA 20), **SP 4.6-35** (avoidance of inadvertent impacts to biological resources within or adjacent to the High Country SMA/SEA 20), and **SP 4.6-53** (updated site-specific surveys for rare, threatened, or endangered plant or animal species at County request).

Peirson's morning-glory. This species has no state or federal status, but is a CNPS List 4 plant. This species has been documented on the project site within the off-site grading sites (FLx 2002). The proposed project would result in impacts to Peirson's morning-glory from these locations. While never abundant, Peirson's morning-glory occurs throughout the Newhall Ranch Specific Plan area on virtually all ridges and slopes (Dudek 2002A, 2004C, 2004F, 2006F, 2006I, and 2007F). Given the low sensitivity status of the species, observations were not mapped. Implementation of the proposed project would result in the permanent loss of approximately 243 acres (85%) and temporary disturbance of approximately 42 acres (15%) of habitat for this species within the Landmark Village project site. Approximately 4,136 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

Because Peirson's morning-glory commonly occurs within the Newhall Ranch Specific Plan area, and because CNPS List 4 plants are not considered Rare from a statewide perspective, are not defined as Rare, Threatened or Endangered pursuant to the California Endangered Species Act, are not eligible for state listing as Threatened or Endangered, and currently are not significantly threatened statewide (CNPS 2004), the impacts to Peirson's morning-glory would not be considered a substantial adverse effect on a special-status species. Nor would this loss be expected to reduce regional populations of the species to below self-sustaining numbers. Therefore, impacts to Peirson's morning-glory would be less than significant. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR and Additional Analysis, which found that impacts to this species would not be significant assuming implementation of Specific Plan Mitigation Measures **SP 4.6-27** (removal of grazing and enhancement of riparian habitat in the High Country SMA/SEA 20), **SP 4.6-34** (marking and inspection of grading perimeters prior to impacts within

This impact would also be reduced through the implementation of the following:

- Mitigation Measure LV 4.4-1 (development of a conceptual wetlands mitigation plan);
- Mitigation Measure LV 4.4-6 (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation);
- Mitigation Measure LV 4.4-15 (restriction of construction activities in the riverbed to specified areas);
- Mitigation Measure LV 4.4-18 (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities);
- Mitigation Measures LV 4.4-29 through LV 4.4-41 (wetlands mitigation plan and riparian restoration activities on the Project site); and
- Mitigation Measure LV 4.4-2 (preservation of 155.7 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Landmark Village dedication of the Salt Creek area to the public).

Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Parish's sagebrush. Parish's sagebrush, which is considered special-status by the County of Los Angeles, grows intermixed with the big sagebrush subspecies, which has no special status. Given the low sensitivity status of the species, observations were not mapped. Implementation of the proposed project would permanently impact 2.26 (18%) of the 12.7 acres of big sagebrush scrub on site, including the loss of individual Parish's sagebrush shrubs, as well as the temporary disturbance of approximately 10.4 acres (82%) of habitat for this species within the Landmark Village project site. Approximately 11 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

Thus potential impacts to Parish's sagebrush as a result of implementation of the proposed project would (1) constitute a substantial direct adverse effect on this species, (2) conflict with local policies and ordinances protecting biological resources, and (3) substantially reduce the number and range of this species. Thus, this impact is significant, absent mitigation. In order to reduce direct impacts to this species, the Project applicant would implement a series of mitigation measures designed to avoid or minimize the impact of Project implementation on Parish's sagebrush to a level that is adverse but not significant. Applicable mitigation measures include the following previously incorporated measures:

- Mitigation Measures SP 4.6-1 through SP 4.6-16 and SP 4.6-21 through SP 4.6-26 (habitat restoration, enhancement, and preservation of the River Corridor SMA/SEA 23); and
- Mitigation Measure SP 4.6-28 (mitigation banking for riparian habitats).

This impact would also be reduced through the implementation of the following:

- Mitigation Measure LV 4.4-1 (development of a conceptual wetlands mitigation plan);
- Mitigation Measure LV 4.4-15 (restriction of construction activities in the riverbed to specified areas);
- Mitigation Measure LV 4.4-18 (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities);
- Mitigation Measures LV 4.4-29 through LV 4.4-41 (wetlands mitigation plan and riparian restoration activities on the Project site); and
- Mitigation Measure LV 4.4-2 (preservation of 155.7 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Landmark Village dedication of the Salt Creek area to the public).

Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. Impacts to this species were not previously analyzed as part of the Newhall Ranch Specific Plan Program EIR and Additional Analysis because the plant was identified after that environmental documentation was certified.

Everlasting. While the undescribed species of everlasting that was observed on the project site currently has no sensitivity status, its apparent rarity may cause it to be assigned a sensitivity status by CNPS or state/federal resource agencies in the future. The County has been informed of the presence of this undescribed species on the Newhall Ranch Specific Plan area and work is being conducted by UC Riverside herbarium staff to describe this species and to learn more about its distribution in California. As previously discussed, two populations of this undescribed species were observed on the project site (within the Santa Clara River and Castaic Creek) during surveys conducted in 2004 and 2007. One of these populations was documented as partially occurring within the proposed utility corridor (to the east of the tract map site) while the other population was documented within the proposed construction zone associated with Long Canyon bridge across the Santa Clara River. Based on current conditions, the proposed project would temporarily impact ten of the individuals observed in 2004 and three of the individuals observed in 2007.

Additionally, the large storm events of 2005 and associated large flows within Castaic Creek and the Santa Clara River resulted in extensive scouring and the removal of the terraces and benches on which plants had previously occurred. As several feet of channel bottom has been washed away, the existing seed bank within these locations was also presumably washed downstream. Therefore, given the potential of seeds from plant populations upstream of the project site to be washed onto the site, this species could occur at additional locations within the project boundaries in the future. The impacts to

individual plants of this undescribed species would be considered a significant impact. In order to reduce indirect impacts to this species, the Project applicant would implement a series of mitigation measures designed to protect this undescribed everlasting species from impacts due to buildout of the proposed project. Applicable mitigation measures include the following previously incorporated measures:

- Mitigation Measure **SP 4.6-16** (guidelines for the control of access to the River Corridor SMA);
- Mitigation Measure **SP 4.6-20** (guidelines for grading activities within the River Corridor SMA/SEA 23);

mitigation program (Mitigation Measure **SP 4.6-67**), the buffer area would be revegetated with a native seed mix to prevent erosion and reduce the potential of invasive plants from encroaching on the preserved spineflower populations. Consistent with requirements of the mitigation program (Mitigation Measure **SP 4.6-69**), the grading concept considered the effects of indirect impacts associated with altered hydrologic patterns. Manufactured slopes surrounding the plant population have been contoured to direct storm water runoff away from the plants. Since the population occurs at a high point, the amount and location of runoff received by these populations would not be affected in the post-developed condition.

Other potential indirect impacts resulting from trampling, domestic animals, incidental application of chemicals, increased fire frequency, and supplemental irrigation would be mitigated by the design of the proposed project. Specifically, the proposed project has been designed such that areas that would be occupied by humans (e.g., residences, business, schools, parks) are separated from preserved populations of San Fernando Valley spineflower by the Santa Clara River or SR-126. Additionally, no landscaping or other uses involving the application of chemicals or irrigation are proposed near preserved spineflower populations. Therefore, it is not expected that the occupancy or operation of the proposed project would result in trampling, a substantial increase in domestic animals (i.e., cats and dogs), incidental application of chemicals, increased fire frequency, or supplemental irrigation (and a corresponding increase in Argentine ants) to preserved spineflower populations. For the reasons discussed above, the proposed project design, grading concept, buffers, and implementation of the measures contained in the Newhall Ranch Specific Plan EIR and Revised Additional Analysis, would reduce the potential for indirect impacts to San Fernando Valley spineflower to below a level of significance.

(g) Protected Oaks and Live Oak Woodland

As previously discussed (**Subsection 7.b, Oaks**), CLAOTO protects any species in the genus *Quercus* that is at least 8 inches in diameter or has a combined trunk circumference of any two trunks of at least 38 inches (12 inches in diameter), as measured 4.5 feet above the mean natural grade. A heritage oak, as defined by CLAOTO, is an oak tree that measures 36 inches or more in diameter as measured 4.5 feet above natural ground, or any oak of 36 inches or greater in diameter having a significant historical or cultural importance to the community. CLAOTO requires that all potential impacts to oak trees be preceded by an application to the County that includes a detailed oak tree report and that loss of or damage to protected oaks be mitigated at a minimum 2:1 ratio.

Public Resources Code Section 21083.4 addresses oak woodlands conservation, and contains provisions for counties to mitigate impacts to oak woodlands that would be significant under CEQA. Under this Section, an "oak" is defined as a "native tree species in the genus *Quercus*, not designated as Group A or

Group B commercial species pursuant to regulations adopted by the State Board of Forestry and Fire Protection pursuant to Section 4526, and that is 5 inches or more in diameter at breast height.” Although, the statute does not provide a definition of “oak woodland,” Public Resources Code § 12220(g) provides helpful guidance. It defines “forest land” – which would include oak woodland -- as any “land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for mangment of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.”

Using Section 12220(g) as a guide, this EIR defines “oak woodland” as an area with at least 10% cover by oak trees with an understory of non-grass vegetation and at least 20% cover by oak trees with an understory of grass vegetation. Oak/grass includes areas where oak trees comprise between 10% and 20% of the total cover with an understory of grass vegetation. As part of this EIR’s Vegetation Communities analysis, biologists surveyed the site and identified all oak woodlands meeting this definition. Note that these surveys not only captured the oak woodland habitat, but also the entire range of oak trees in terms of size and maturity, including all trees with trunk diameters of five (5) inches or more, measured at breast height, as required under Public Resources Code 21083.4(a). These surveys indicate that the project site supports 4.0 acres of oak woodland, as defined. Section 21083.4 provides for several mitigation alternatives that can be implemented to mitigate significant impacts on oak woodlands. Among the options are the preservation of oak woodlands under conservation easements and the planting of oak trees to replace those lost or damaged.

Based on the proposed grading plan, 23.4 acres of coast live oak woodland would be removed. This is considered a potentially significant effect under CEQA, thus triggering the mitigation requirements set forth in Public Resources Code § 21083.4.

In addition, ~~the~~ proposed project would result in the potential loss of 65 oak trees, including 10 heritage oak trees, and the encroachment of 8 additional oak trees, including 2 heritage oak trees. (Impact Sciences 2009, Recirculated Draft EIR, **Appendix 4.4.**) A total of 98 oak trees occur within 200 feet from the grading limit line and will not be removed or subjected to damage. Given the biological value of oak woodlands, and given that the project would result in the removal or impacts to oak trees, the loss of oak woodland and protected oak trees is considered a significant impact under CLAOTO.

As discussed in the Newhall Ranch Specific Plan, 2.6 Resource Management Plan, an estimated 13,660 oak trees would be protected within the SMA, particularly in the High Country SMA/SEA 20. Further, as discussed in the *Draft Newhall Ranch Mitigation Feasibility Study* (Dudek 2007), Dudek has identified the opportunity of creating 11 acres of coast live oak woodland and planting an additional 189 oak trees within the High Country SMA/SEA 20 and Salt Creek Area (see November 2007 Landmark Village Final

EIR, Appendix A). The actual number of trees to be planted would be that number necessary to comply with the requirements stipulated in the Oak Tree Permit issued by the County pursuant to CLAOTO and to provide an adequate mitigation acreage for losses to oak woodland per Section 21083.4. Note that Section 21083.4 provides counties and project applicants with a number of mitigation alternatives, including the preservation of oak woodlands under conservation easements and the planting of oak trees to replace those lost or damaged. (Pub.Res.Code § 21083.4(b)(1) and (2).)

In order to reduce direct impacts to oak resources, the Project applicant would implement a series of mitigation measures designed to replace impacted oak trees in accordance with ~~the~~ CLAOTO; restore, enhance, and maintain natural woodland communities in perpetuity; and create new woodlands in areas that supported oaks and oak woodlands prior to development, as required under Public Resources Code § 21083.4. Applicable mitigation measures include the following previously incorporated measures:

- Mitigation Measures **SP 4.6-1** through **SP 4.6-16** and **SP 4.6-21** through **SP 4.6-26** (habitat restoration, enhancement, and preservation of the River Corridor SMA/SEA 23);
- Mitigation Measure **SP 4.6-17** (restrictions on human and pet access to the River Corridor SMA/SEA 23);
- Mitigation Measures **SP 4.6-18** and **SP 4.6-19** (establishment of transition areas between the River Corridor SMA/SEA 23 and development);
- Mitigation Measure **SP 4.6-27** (habitat enhancement of the High Country SMA/SEA 20);
- Mitigation Measure **SP 4.6-28** (mitigation banking for oak resources);
- Mitigation Measures **SP 4.6-29** through **SP 4.6-32** (recreation and access restrictions within the High Country SMA/SEA 20);
- Mitigation Measure **SP 4.6-33** (protection of transition areas between the development edge and the High Country SMA/SEA 20);
- Mitigation Measures **SP 4.6-34** and **SP 4.6-35** (clear marking of grading perimeters and avoidance of inadvertent impacts to biological resources outside of the grading area within or adjacent to the High Country SMA/SEA 20);
- Mitigation Measures **SP 4.6-37** through **SP 4.6-42** (long-term management of the High Country SMA/SEA 20);
- Mitigation Measures **SP 4.6-43** through **SP 4.6-47** (acceptable uses of and long-term management of Open Area);
- Mitigation Measure **SP 4.6-48** (standards for the restoration and enhancement of oak resources); and

- Mitigation Measure **SP 4.6-62** (any changes to an approved oak tree permit would require that the oak tree report for that oak tree permit be amended for the area of change).

This impact would also be reduced through the implementation of the following:

- Mitigation Measure **LV 4.4-6** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation);
- Mitigation Measure **LV 4.4-7** (protective fencing around oaks during clearing and grading activities);
- Mitigation Measure **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities); and
- Mitigation Measure **LV 4.4-2** (preservation of 155.7 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Landmark Village dedication of the Salt Creek area to the public).

Compliance with the permit conditions and implementation of Specific Plan Mitigation Measure **SP 4.6-48**, as well as the ~~above proposed~~ Mitigation Measures proposed above, would reduce impacts to oak trees and oak woodland ~~habitats~~ to below a level of significance, thereby meeting the requirements of both CLAOTO and Public Resources Code §. These measures would also meet the requirements of Section 21083.4. The finding that impacts to protected oaks can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

For discussion on the temporary loss of carbon sequestration through vegetation removal, including oak woodlands, please see **Section 4.23, Global Climate Change**, of this EIR.

(h) Special-Status Wildlife Species

Certain special-status wildlife species that known to occur in the project region were eliminated from further consideration in this report because the project site lacks suitable habitat to support the species as a resident or nesting species or because surveys have established that the species is not expected to frequently utilize the project site. As a result, the species are not expected to reside on or substantially utilize the project site. As shown in **Table 4.4-8**, above, these species include the following: vernal pool fairy shrimp, San Diego fairy shrimp, Riverside fairy shrimp, Quino checkerspot butterfly, coast range newt, coastal (San Diego) cactus wren, great egret, great blue heron, Swainson's hawk, mountain plover, bald eagle, least bittern, long-billed curlew, osprey, double-crested cormorant, white-faced ibis, purple martin, bank swallow, California spotted owl, Mexican long-tongued bat, spotted bat, Los Angeles pocket mouse, and big free-tailed bat.

As noted in **Table 4.4-6**, above, the following special-status wildlife species were observed during the course of various field surveys conducted on or adjacent to the project site: monarch butterfly, the spring snail, ~~the undescribed snail species~~ *Pyrgulopsis castaicensis* n. sp., known from Middle Spring, San Emigdio blue butterfly, Santa Ana sucker, unarmored threespine stickleback, arroyo chub, arroyo toad, western spadefoot toad, southwestern pond turtle, silvery legless lizard, coastal western whiptail, coast horned lizard, two-striped garter snake, Cooper's hawk (nesting), sharp-shinned hawk (nesting), tricolored blackbird (nesting colony), southern California rufous-crowned sparrow, golden eagle (nesting and wintering), short-eared owl (nesting), long-eared owl (nesting), western burrowing owl (burrow sites), oak titmouse (nesting), ferruginous hawk (wintering), Costa's hummingbird (nesting), Lawrence's goldfinch, turkey vulture, northern harrier (nesting), western yellow-billed cuckoo (nesting), yellow warbler (nesting), white-tailed kite (nesting), willow flycatcher (nesting), southwestern willow flycatcher (nesting), California horned lark, merlin (wintering), prairie falcon (nesting), American peregrine falcon, California condor, yellow-breasted chat (nesting), loggerhead shrike, black-crowned night heron (rookery), Nuttall's woodpecker (nesting), summer tanager (nesting), coastal California gnatcatcher, vermilion flycatcher (nesting), Allen's/Rufous hummingbird (nesting), chipping sparrow (nesting), least Bell's vireo (nesting), yellow-headed blackbird, pallid bat, western mastiff bat, western red bat, San Diego black-tailed jackrabbit, fringed myotis, Yuma myotis, San Diego desert woodrat, pocketed free-tailed bat, mule deer, mountain lion, American badger, and black bear.

Based on the presence of suitable habitat on the project site, it is reasonable to conclude that certain special-status species could occur on site prior to grading or construction activities associated with project implementation (see **Table 4.4-7**, above). Although not observed during surveys, the following species could potentially occur on the project site: Trask shoulderband, southern steelhead, California red-legged frog, rosy boa, San Bernardino ringneck snake, coast patch-nosed snake, south coast garter snake, Bell's sage sparrow, black-chinned sparrow, ringtail, Townsend's big-eared bat, western small-footed myotis, long-legged myotis, and southern grasshopper mouse.

Impacts to Species Observed On or Adjacent to the Landmark Village Site

Monarch Butterfly (*Danaus plexippus*). The monarch butterfly is a listed California Special Animal. The species' distribution is controlled by the distribution of its larval host plants (i.e., various milkweeds, genus *Asclepias*). Individual monarch butterflies were observed during surveys conducted in April and May of 2004 and 2005 as well as during various other wildlife and plant surveys that have been conducted. However, no wintering sites have been observed, and, due to the site's distance from the coast, it is unlikely that the Project area would be used by large numbers of overwintering adults (Compliance Biology, Inc. 2004A). The proposed project does not include any development or construction-related activities that would affect a wintering site. Therefore, impacts to this species would

be less than significant. Impacts to this species were not previously analyzed as part of the Newhall Ranch Specific Plan Program EIR and Additional Analysis because the species was identified after that environmental documentation was certified.

San Emigdio Blue Butterfly (*Plebulina emigdionis*). The San Emigdio blue butterfly is designated by CDFG as a California Special Animal. This butterfly can be locally abundant in association with its primary host plant, four-wing saltbush (*Atriplex canescens*), but has also been observed in association with quail brush (*A. lentiformis*) (Compliance Biology, Inc., 2004C, 2005). During the 2004 surveys, San Emigdio blue butterfly was documented within the Specific Plan area in the west-central edge of Potrero Canyon. During the 2005 surveys, five adult San Emigdio blue butterflies were again observed at this location. One San Emigdio blue butterfly was also observed in the High Country SMA/SEA 20 at the northwestern edge of Salt Canyon during the 2005 surveys; however, no additional observations of the species were made at this location or other portions of Salt Canyon during the 2005 surveys (Compliance Biology, Inc., 2005). The proposed project does not include any development or construction-related activities that would affect a population or a concentration of the host plant. Therefore, impacts to this species would be less than significant. Impacts to this species were not previously analyzed as part of the Newhall Ranch Specific Plan Program EIR and Additional Analysis because the species was identified after that environmental documentation was certified.

~~Undescribed Snail (*Pyrgulopsis sp. nova*)~~ ***Pyrgululopsis castaicensis* n. sp.** This spring snail has no current status; however, in 2006, it was observed within portions of the Middle Canyon Spring within the Specific Plan EIR. In addition, the snail's habitat requirements are unknown and a comprehensive distribution survey has not yet been attempted. The species was first observed within Middle Canyon Spring by USFWS biologists in 2006. In 2007, Dudek biologists observed over 100 snails (these snails were not identified to genus or species at the time, and it is not known whether they were *Pyrgululopsis castaicensis* n. sp. ~~the undescribed snail~~ or another freshwater snail) in Middle Canyon Spring and the lower-most reach of the Middle Canyon drainage, and immediately below the river terrace where the spring discharges into the upper river floodplain. At the time the unidentified snails were observed in the mouth of the Middle Canyon drainage (non-spring area), agricultural runoff from irrigated fields in the lower valley of Middle Canyon supported flow in the lower portion of the drainage (Dudek 2007C). The proposed project does not include any development or construction-related activities that would affect the Middle Canyon Spring. Therefore, impacts to this species would be less than significant. Impacts to this species were not previously analyzed as part of the Newhall Ranch Specific Plan Program EIR and Additional Analysis because the species was identified after that environmental documentation was certified.

Santa Ana sucker (*Catostomus santaanae*). The Santa Ana sucker is listed as a California Species of Special Concern throughout its range. Outside of the Newhall Ranch Specific Plan area, populations within the species' natural historic range, including the Los Angeles, San Gabriel, and Santa Ana River basins, are listed federally as threatened. It is also considered sensitive by the U.S. Forest Service, critically imperiled by the Natural Heritage Program, and vulnerable by the IUCN World Conservation Union. The fish are most abundant in cool, shallow streams with good water quality and with streamside riparian vegetation that can provide refuge during seasonal floods and repopulation after flooding (Buth and Crabtree 1982; NatureServe 2007). This species has been documented within the Specific Plan area throughout the Santa Clara River. Potential habitat for fish was not quantified because the fish are confined to the wetted channel of the Santa Clara River, the surface area of which is variable (i.e., may expand during the winter rainy season and become more confined during the dry summer season). In their collections within the Specific Plan area of the NRSP Project site, ENTRIX (2009) found that the Santa Ana sucker was common. Surveys conducted on June 3 and July 14, 2000, found this species within 500 meters upstream and downstream of the I-5 Bridge over the Santa Clara River (Impact Sciences, Inc. 2003A, 2003B; Haglund and Baskin 2000). This species is not expected to occur in Salt Creek. Construction activities associated with the proposed Long Canyon Road Bridge, bridge abutments, and temporary haul routes could cause impacts to individual fish. Although the proposed bank stabilization features are set back beyond the existing riparian corridor in most of the project site and would not interface with the active stream channel, a significant impact could occur, depending on the number and extent of this species that may be disturbed or removed during construction of the bridge. Mitigation measures to reduce these impacts below significant levels include the following:

- **SP 4.6-53** (surveys for special-status species),
- **SP 4.6-57** (exclusion/removal of fish from areas of proposed bridge construction),
- **SP 4.6-58** (require compliance with water quality permits), and
- **SP 4.6-59** (surveys for special-status species).
- **LV 4.4-8** (pre-construction surveys of the riverbed for unarmored threespine stickleback, arroyo chub, and Santa Ana sucker),
- **LV 4.4-10** (development of a Stream Crossing and Diversion Plan),
- **LV 4.4-11** (regulating stream diversion bypass channels and dewatering),
- **LV 4.4-12** (creation of habitat for special-status fish during construction),
- **LV 4.4-13** (installation of structures within the riverbed not to impair movement of aquatic life),
- **LV 4.4-14** (prevention of mud and pollutants from entering streams and storm flows),

- LV 4.4-15 (restriction of construction activities in the riverbed to specified areas),
- LV 4.4-43 (dust control measures to protect vegetation communities and special-status plant and aquatic wildlife species).

These mitigation measures would reduce direct impacts to the Santa Ana sucker to less than significant. The finding that impacts to Santa Ana sucker can be reduced to less than significant with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*). The unarmored threespine stickleback is listed as both state and federally endangered and is a California Fully Protected species. The USFWS (1985) notes that the unarmored threespine stickleback can be found in all areas of streams; however, they tend to gather in slow-moving and standing water or behind obstructions, at the edges of streams, or in vegetation in faster-moving water. This species has been documented in the Santa Clara River adjacent to the Landmark Village project site and within the Santa Clara River portion of the Specific Plan in 1988, 1995, 2000, 2002–2005, and 2007 (Aquatic Consulting Services, Inc., 2002A–D; ENTRIX 2009; Haglund 1989; SMEA 1995, 2000; Impact Sciences, Inc., 2003A–C). Potential habitat for fish was not quantified because the fish are confined to the wetted channel of the Santa Clara River, the surface area of which is variable (i.e., may expand during the winter rainy season and become more confined during the dry summer season). Construction activities associated with the proposed Long Canyon Road Bridge, bridge abutments, and temporary haul routes could impact individual fish, and there is a potential for significant residual impacts to the unarmored threespine stickleback. However, the proposed bank stabilization features are set back beyond the existing riparian corridor at most of the project site and would not interface with the active stream channel. Mitigation measures to reduce impacts on the unarmored threespine stickleback to less than significant include the following:

- SP 4.6-53 (surveys for special-status species),
- SP 4.6-54 (consultation with USFWS),
- SP 4.6-57 (exclusion/removal of fish from areas of proposed bridge construction),
- SP 4.6-58 (require compliance with water quality permits),
- SP 4.6-59 (surveys for special-status species).
- LV 4.4-8 (pre-construction surveys of the riverbed for unarmored threespine stickleback, arroyo chub, and Santa Ana sucker),
- LV 4.4-10 (development of a Stream Crossing and Diversion Plan),
- LV 4.4-11 (regulating stream diversion bypass channels and dewatering),

- **LV 4.4-12** (construction of habitat for special-status fish during construction),
- **LV 4.4-13** (installation of structures within the riverbed not to impair movement of aquatic life),
- **LV 4.4-14** (prevention of mud and pollutants from entering streams and storm flows),
- **LV 4.4-15** (restriction of construction activities in the riverbed to specified areas), and
- **LV 4.4-43** (dust control measures to protect vegetation communities and special-status plant and aquatic wildlife species).

Implementation of these mitigation measures would prevent direct impacts to the unarmored threespine stickleback. The finding that impacts to unarmored threespine stickleback can be reduced to less than significant with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Arroyo chub (*Gila orcutti*). The arroyo chub is listed as a California Species of Special Concern, is considered imperiled regionally and globally under the Natural Heritage Program methodology, and is considered sensitive by the U.S. Forest Service. It occurs in slow-moving or backwater sections of warm to cool (10°C to 24°C) streams with mud or sand substrates (ENTRIX 2009). This species has been documented in the Santa Clara River and could occur in the portion of the river adjacent to the project site. In their collections within the Specific Plan area of the NRSP Project site, ENTRIX (2009) found that the arroyo chub was common to abundant. ENTRIX (2009) describes the arroyo chub as the dominant species of the Santa Clara River within the Project area. Potential habitat for fish was not quantified because the fish are confined to the wetted channel of the Santa Clara River, the surface area of which is variable (i.e., may expand during the winter rainy season and become more confined during the dry summer season). Construction activities associated with the proposed Long Canyon Road Bridge, bridge abutments, and temporary haul routes could result in impacts to the species. Although the proposed bank stabilization features are set back beyond the existing riparian corridor at most of the project site and would not interface with the active stream channel, a significant impact could occur, depending on the number and extent of this species that may be disturbed or removed during construction of the bridge. Mitigation measures to reduce impacts to less-than-significant levels include the following:

- **SP 4.6-44** (soft bottoms for all flows greater than 2,000 cubic feet per second [cfs]),
- **SP 4.6-53** (surveys for special-status species),
- **SP 4.6-54** (consultation with USFWS),
- **SP 4.6-57** (removal of fish from areas of proposed bridge construction), **SP 4.6-58** (require compliance with water quality permits),

- **SP 4.6-59** (consultation with County and CDFG before surveys for special-status species).
- **LV 4.4-8** (pre-construction surveys of the riverbed for unarmored threespine stickleback, arroyo chub, and Santa Ana sucker),
- **LV 4.4-10** (development of a Stream Crossing and Diversion Plan),
- **LV 4.4-11** (regulating stream diversion bypass channels and dewatering),
- **LV 4.4-12** (creation of habitat for special-status fish during construction),
- **LV 4.4-13** (installation of structures within the riverbed not to impair movement of aquatic life),
- **LV 4.4-14** (prevention of mud and pollutants from entering streams and storm flows),
- **LV 4.4-15** (restriction of construction activities in the riverbed to specified areas), and
- **LV 4.4-43** (dust control measures to protect vegetation communities and special-status plant and aquatic wildlife species).

Implementation of these measures and Specific Plan Mitigation Measures **SP 4.6-57** and **SP 4.6-58** would reduce direct impacts to the arroyo chub to less than significant. The finding that impacts to arroyo chub can be reduced to less than significant with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Arroyo toad (*Anaxyrus (Bufo) californicus*). The arroyo toad is listed as a California Species of Special Concern and is federally endangered. The species utilizes aquatic, riparian, and upland habitats to different degrees depending on the individual's stage of development and the season. The riparian areas on and adjacent to the project site provide suitable habitat for this species. No adult or subadult arroyo toads have been observed in the Project area. However, in 2000, arroyo toad tadpoles were observed in the Castaic Junction area (in a location on or adjacent to the project site) east of the project (Aquatic Consulting Services, Inc. 2002A–D). Specifically, during the surveys conducted by Aquatic Consulting Services, arroyo toad tadpoles were observed in the Santa Clara River upstream and downstream of the proposed Commerce Center Drive Bridge site and near the Valencia Water Treatment Plant. Arroyo toad was not observed breeding or otherwise utilizing habitats on or bordering the project site during more recent protocol surveys (Compliance Biology 2004F; Bloom Biological 2007). ~~In addition, on April 13, 2005, the USFWS issued a revised critical habitat designation for the arroyo toad.¹⁸ In that Final Rule, effective May 13, 2005, the USFWS deleted the entire Newhall Ranch Specific Plan area from the designated critical habitat for the arroyo toad. Note, however, that USFWS is currently reassessing the 2005 Final Rule to determine whether the critical habitat designation should be adjusted. The USFWS has proposed changes to the 2005 Final Rule, published in the Federal Register on October 13, 2009~~

On February 9, 2011, the USFWS issued a Final Rule for revised critical habitat for the arroyo toad (76 FR 7246). The revised critical habitat designation totals 98,366 acres in 21 habitat units, some of which are further divided into subunits. The revised critical habitat designation for arroyo toad includes

~~70 FR 19562~~

Subunit 6b located in the Santa Clara River and Castaic Creek in the project vicinity. According to the USFWS, "This subunit allows for natural population expansion and fluctuation of the Santa Clara River population by connecting arroyo toad habitat in Castaic Creek with San Francisquito Creek and the occupied reach of the Santa Clara River." (76 FR 7261). A portion of the Subunit 6b critical habitat intersects the Landmark Village project site; the project site contains 49 acres of critical habitat.

~~In addition, on April 13, 2005, the USFWS issued a revised critical habitat designation for the arroyo toad. (See 70 Fed. Reg. 19562.) In that Final Rule, effective May 13, 2005, the USFWS deleted the entire Newhall Ranch Specific Plan area from the designated critical habitat for the arroyo toad. Note, however, that USFWS is currently reassessing the 2005 Final Rule to determine whether the critical habitat designation should be adjusted. Should USFWS propose any changes to the 2005 Final Rule, they will be published in the Federal Register sometime in 2009.~~

Given that: (a) the site provides suitable supports federally designated critical habitat for the arroyo toad, ~~that this;~~ that this (b) the species has been recorded in low numbers upstream of the project site; ~~and that~~ (c) tadpoles were documented in the river on and adjacent to the project site, construction-related activities that could result in impacts to individual toads, ~~which~~ would be a significant impact. In order to reduce short-term construction-related impacts to this species, the Project applicant would implement a series of mitigation measures designed to limit construction activities within high quality habitat areas and capture and relocate animals away from the work area prior to construction. Equipment would not be operated within areas of ponded or flowing water (unless otherwise approved by the Corps and CDFG), and water containing mud, silt, and other pollutants would not be allowed to enter flowing water. Further, any arroyo toads potentially present would be removed from the disturbance footprint by qualified biologists and placed in a pre approved area capable of supporting the species. In addition, the Project applicant would conduct biological monitoring during ground disturbing activities in an effort to salvage animals that may be uncovered during construction activities. Applicable mitigation measures include the following:

- **SP 4.6-53** and **SP 4.6-59** (surveys for special-status species within the Project area),
- **SP 4.6-55** (federal and state permits for wetland impacts), and
- **SP 4.6 58** (NPDES and water quality permits).

- LV 4.4-10 (development of a Stream Crossing and Diversion Plan),
- LV 4.4-11 (regulating stream diversion bypass channels and dewatering),
- LV 4.4-12 (creation of habitat for special-status fish during construction),
- LV 4.4-13 (installation of structures within the riverbed not to impair movement of aquatic life),
- LV 4.4-14 (prevention of mud and pollutants from entering streams and storm flows),
- LV 4.4-15 (restriction of construction activities in the riverbed to specified areas),
- LV 4.4-17 (surveys of riverbed area for arroyo toad), and
- LV 4.4-18 (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities).

Implementation of these mitigation measures would reduce this impact to a level that is less than significant. The finding that impacts to arroyo toad can be reduced to less than significant with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

As to project impacts on arroyo toad habitat, the Landmark Village project site supports approximately 433 acres of potential arroyo toad habitat (including potential upland estivation habitat), although no adults or subadults have been actually observed on the project site.¹⁷ The proposed project would result in the permanent loss of approximately 327 acres (76%) and temporary disturbance of 106 acres (24%) of such habitat. Of the permanently lost habitat, 6.9 acres (2.1%) consist of designated critical habitat for the arroyo toad. Of the habitat that will be temporarily disturbed, approximately 42 acres (40%) consist of critical habitat. Given that the arroyo toad is federally listed as endangered, project impacts to both suitable and critical habitat would be significant, absent mitigation. The County has determined that the project's impacts on arroyo toad habitat, including critical habitat, can be mitigated to a level that is less than significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to less than significant. Note also that approximately 354 acres of critical habitat for the arroyo toad would be protected and managed in the River Corridor SMA/SEA 23.

¹⁷ Prior survey results for arroyo toad within the Newhall Ranch Specific Plan and vicinity articulate the reasons why arroyo toad populations have not been found within the reach of the Santa Clara River, which encompasses the Specific Plan site. Those reasons include, among others, tertiary-treated effluent releases from the existing water reclamation plants, located upstream of the Specific Plan site. Please refer to: (a) Impact Sciences, Inc. Results of Focused Surveys for Arroyo Toad and Special-Status Aquatic Reptiles and Amphibians, Newhall Ranch, Valencia, California (May 21, 2002); and (b) Compliance Biology, Inc. Results of Focused Surveys for Arroyo Toad and Special-Status Aquatic Reptiles and Amphibians, River Village Project, Newhall Ranch, Valencia, California (October 2004). Both reports are incorporated by reference and available for public review and inspection by contacting the County's Department of Regional Planning.

As part of its duties under section 7 of the federal Endangered Species Act, the USFWS is currently analyzing the related Newhall Ranch RMDP/SCP project's impacts on the critical habitat for the arroyo toad. When the USFWS completes that analysis, it is expected to issue a Biological Opinion with respect to whether the Newhall Ranch RMDP/SCP project, which includes the Landmark Village project site, would cause adverse modification of critical habitat or otherwise jeopardize the arroyo toad species. Based on prior evaluations conducted by USFWS, however, the County does not anticipate adverse findings with respect to the arroyo toad or its habitat within the broader Newhall Ranch RMDP/SCP project area.

Western spadefoot toad (*Spea hammondi*). The western spadefoot toad is a listed California Species of Special Concern. The species prefers open areas with sandy or gravelly soils in a variety of habitats, including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, river floodplains, alluvial fans, playas, and alkali flats (Stebbins 2003; Holland and Goodman 1998). In total, there have been four separate documented occurrences of the western spadefoot toad in the Specific Plan area based on the focused surveys and incidental observations. Two occurrences of tadpoles are known from the Mission Village development area (Compliance Biology, Inc., 2006C). A western spadefoot toad was also observed within an isolated pool along the Santa Clara River upstream of the Commerce Center Bridge (Aquatic Consulting Services 2002A). Western spadefoot toads were observed in the Potrero Village development area within a rain pool in winter 2005; this location is believed to be extant (Dave Crawford, Compliance Biology, pers. comm., 2007). As western spadefoot toads have been observed in various locations in the Specific Plan area, and because suitable conditions for the species are expected elsewhere in unsurveyed portions of the Project area, there is a high potential for this species to occur in additional areas that contain seasonal pools. The acreage of potential habitat for this species was not quantified because spatial seasonal breeding pools tend to be small, highly scattered discrete locations. Depending on the number and extent of western spadefoot on the site that would be disturbed or removed, the loss of this species would be a potentially significant impact. Mitigation measures to reduce these impacts below significant levels include the following:

- SP 4.6-53 and SP 4.6-59 (surveys for special-status species within the project area).
- SP 4.6-55 (federal and state permits for wetland impacts), and
- SP 4.6 58 (NPDES and water quality permits).
- LV 4.4-15 (restriction of construction activities in the riverbed to specified areas).
- LV 4.4-10 (development of a Stream Crossing and Diversion Plan),
- LV 4.4-13 (installation of structures within the riverbed not to impair movement of aquatic life),
- LV 4.4-19 (pre-construction surveys for western spadefoot toad), and ~~and~~ and creation of off-site breeding habitat), and

- LV 4.4-18 (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities).

Implementation of these mitigation measures would reduce impacts to western spadefoot to a less than significant level. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Southwestern pond turtle (~~*Clemmys*~~ *Actinemys* ~~*Actinemys*~~ *marmorata pallida*). The southwestern pond turtle is listed as a California Species of Special Concern. Western pond turtles use a variety of aquatic habitats, including lakes, natural ponds, rivers, oxbows, streams (perennial/ephemeral), marshes, vernal pools, freshwater and brackish estuaries, drainage ditches, reservoirs, mill ponds, ornamental park ponds, stock ponds, abandoned gravel pits, and sewage treatment plants (Buskirk 2002; NatureServe 2007). This species has been observed in the portion of the Santa Clara River bordering the project site (Compliance Biology 2004), and could also occur within the riparian habitats on and bordering the project site. The removal of riparian vegetation and construction activities associated with the proposed bridge and/or bank protection could result in impacts to individual pond turtles. These impacts may be significant, depending on the number and extent of this species that may be disturbed or removed. To address these impacts, the following mitigation measures would be implemented:

- LV 4.4-9 (surveys of riverbed area for southwestern pond turtle),
- LV 4.4-13 (installation of structures within the riverbed not to impair movement of aquatic life),
- LV 4.4-14 (prevention of mud and pollutants from entering streams and storm flows),
- LV 4.4-15 (restriction of construction activities in the riverbed to specified areas), and
- LV 4.4-18 (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities).

These mitigation measures would reduce impacts to the southwestern pond turtle to a less-than-significant level. The finding that impacts to southwestern pond turtle can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Implementation of the proposed project would also result in the permanent loss of approximately 15 acres (22%) and temporary disturbance of approximately 53 acres (78%) of habitat for this species within the Landmark Village project site. Approximately 806 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Because this species has exhibited substantial population declines in Southern California, the combined permanent and temporary impacts to suitable habitat could have a substantial adverse effect on the distribution of the southwestern pond

turtle both on site and within its range in Southern California. The combined permanent loss and temporary disturbance of habitat would be significant, absent mitigation. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to less than significant.

Silvery legless lizard (*Anniella pulchra pulchra*). The silvery legless lizard is designated by CDFG as a California Species of Special Concern. This species may be found in sparsely vegetated areas in a variety of habitats, including beach dunes, chaparral, California sagebrush scrub, oak woodlands, pine forests, pine-oak woodland, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks (Zeiner et al. 1988; Stebbins 2003; Holland and Goodman 1998). This species has been observed on the project site within the leaf litter of coast live oak woodlands in Chiquito Canyon. Overall, 23 individual silvery legless lizards were captured and released (Impact Sciences, Inc. 2006A). Silvery legless lizard was also observed at two locations in Long Canyon in 2005 (Chris Huntley, personal communication, October 2006). Because suitable habitat occurs on site in the form of riparian and riverbank habitats within the SMA/SEA 23, as well as scrub, chaparral and oak woodland habitats outside of the SMA/SEA boundary, silvery legless lizard could occur throughout those portions of the site with these habitat types. Construction-related activities could result in impacts to individual lizards.

In order to reduce impacts to this species the Project applicant would implement a series of mitigation measures designed to capture and relocate animals away from the work area prior to construction. While the fossorial behavior of the silvery legless lizard would prevent the capture and relocation of all individuals occurring, specific measures (e.g., seasonal timing and hand raking) are required to maximize capture rates. The captured animals would be handled by qualified biologists and placed in a pre-approved area capable of supporting the species. In addition, the Project applicant would conduct biological monitoring during ground disturbing activities in an effort to salvage silvery legless lizards that may be uncovered during construction activities. Applicable mitigation measures are **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-20** (surveys to capture and relocate special-status reptiles). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 268 acres (72%) and temporary disturbance of approximately 104 acres (28%) of habitat for this species within the Mission Village project site. Absent mitigation, these impacts would be considered significant. Note, however, that approximately 339 acres (28%) of suitable habitat on site would not be impacted and approximately 6,073 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The Newhall Ranch Specific Plan Program EIR concluded that the substantial loss of habitat, and potential impacts to individuals of this species, would be considered an unavoidable significant impact; however, the mitigation proposed in the Specific Plan EIR was not as extensive as this Recirculated Landmark Village EIR. See **Subsection 9.b.(1)(b), Wildlife Habitat Loss**, for a discussion of project-related impacts to special-status wildlife due to habitat loss. ~~In addition to the project specific mitigation measures described above, a total of 6, acres of habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Applicable mitigation measures include LV 4.4-2 (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village); LV 4.4-6 (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and LV 4.4-28 (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). As a result, this EIR's finding that impacts on the silvery legless lizard can be mitigated to a less than significant level is consistent with the findings set forth in the Newhall Ranch Specific Plan Program EIR. Also, see **Wildlife Habitat Loss** for a discussion of project related impacts to special status wildlife due to habitat loss.~~

Coastal western whiptail (*Aspidoscelis tigris stejnegeri*). The coastal western whiptail is designated by CDFG as a California Special Animal. The coastal western whiptail is found in a variety of habitats, primarily in areas where plants are sparse and there are open areas for running. The species is also found in woodland and streamside growth and avoids dense grassland and thick shrub growth. While coastal western whiptails were not trapped or otherwise observed during pitfall trap surveys, the subspecies was identified as having the potential to occur in the Project area (Impact Sciences, Inc., 2006A). Because of observations in the High Country SMA/SEA 20 and nearby locations (Compliance Biology, Inc., 2006; Dudek and Associates, Inc., 2006B), the presence of suitable habitat, observance that the Project area is within the range of the subspecies as described by Stebbins (2003), and the fact that the entire Project area was not surveyed by Impact Sciences (2006A) at a level of detail necessary to determine presence or absence of a particular reptile species, the coastal western whiptail is assumed to be present in the Project area. Construction-related activities could result in impacts to individual whiptails.

In order to reduce impacts to this species, the Project applicant would implement four mitigation measures designed to capture and relocate animals away from the work area prior to construction. The captured animals would be handled by qualified biologists and placed in a pre-approved area capable of supporting the subspecies. In addition, the Project applicant would conduct biological monitoring during ground disturbing activities in an effort to salvage animals that may be uncovered during construction activities. Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and

SP 4.6-59 (surveys for special-status species within the Project area). Additional applicable mitigation measures are LV 4.4-18 (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and LV 4.4-20 (surveys to capture and relocate special-status reptiles). Implementation of these mitigation measures would reduce this impact during construction to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 256 acres (79%) and temporary disturbance of approximately 67 acres (21%) of habitat for this species within the Mission Village project site. Absent mitigation, these impacts would be considered significant. Note, however, that approximately 257 acres (24%) of suitable habitat on site would not be impacted and approximately 5,692 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The Newhall Ranch Program EIR concluded that the substantial loss of habitat, and potential impacts to individuals of this species, would be considered a significant unavoidable impact; however, the mitigation proposed in the Specific Plan EIR was not as extensive as this Recirculated Landmark Village EIR. See **Subsection 9.b.(1)(b), Wildlife Habitat Loss**, for a discussion of project-related impacts to special-status wildlife due to habitat loss. In addition to the project-specific mitigation measures described above, a total of 6,113 5,692 acres of potential suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Applicable mitigation measures include LV 4.4-2 (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village); LV 4.4-6 (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and LV 4.4-28 (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. As a result, this EIR's finding that impacts on the whiptail can be mitigated to a less than significant level is consistent with the findings set forth in the Newhall Ranch Specific Plan Program EIR. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss. Impacts to this species were not previously analyzed as an individual topic at the program level in the Newhall Ranch Specific Plan Program EIR.

Coast horned lizard (*Phrynosoma coronatum*). The coast horned lizard is listed as a California Species of Special Concern. The species is found in a wide variety of vegetation types with the requisite loose sandy soils, including California sagebrush scrub, annual grassland, chaparral, oak woodland, riparian woodland, and coniferous forest (Klauber 1939; Stebbins 1954). One coast horned lizard was captured during the 2006 pitfall trap surveys and five additional coast horned lizards were incidentally observed

during the 2004 reptile surveys (Impact Sciences, Inc., 2006A). The coast horned lizard observed during the 2006 surveys was captured in the eastern portion of the Specific Plan area (in the vicinity of the Potrero Village development area) in an area described as containing sandy soils and riparian and non-native grassland vegetation (Impact Sciences, Inc. 2006A). No location or habitat association information was provided for the coast horned lizards incidentally observed during the 2004 surveys. Coast horned lizard was also observed along the Santa Clara River floodplain, approximately 500 feet south of The Old Road Bridge in 2006 (Chris Huntley, personal communication, October 2006). Construction-related activities could result in impacts to individual horned lizards.

In order to reduce these impacts, the Project applicant would implement a series of mitigation measures designed to capture and relocate animals away from the work area prior to construction. The captured animals would be handled by qualified biologists and placed in a pre-approved area capable of supporting the species. In addition, the Project applicant would conduct biological monitoring during ground-disturbing activities in an effort to salvage animals that may be uncovered during construction activities. Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (surveys for special-status species within the Project area). Additional applicable mitigation measures are **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-20** (surveys to capture and relocate special-status reptiles). Implementation of these mitigation measures would reduce this impact to a level that is less than significant.

Implementation of the proposed project would also result in the permanent loss of approximately 256 acres (79%) and temporary disturbance of approximately 67 acres (21%) of habitat for this species within the Landmark Village project site. Absent mitigation, these impacts would be considered significant. ~~HNote, however, that approximately 257 acres (24%) of suitable habitat on site would not be impacted and approximately 5,692 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.~~

The Newhall Ranch Specific Plan Program EIR concluded that the substantial loss of habitat, and potential impacts to individuals of this species, would be considered an unavoidable significant impact; however, the mitigation proposed in the Specific Plan EIR was not as extensive as this Recirculated Landmark Village EIR. See **Subsection 9.b.(1)(b), Wildlife Habitat Loss**, for a discussion of project-related impacts to special-status wildlife due to habitat loss. In addition to the mitigation measures described above, a total of 6,113 5,692 acres of potential suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Additional mitigation to that in the Newhall Ranch Specific Plan Program EIR includes **LV 4.4-2** (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the

Specific Plan area to offset impacts associated with Landmark Village); LV 4.4-6 (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and LV 4.4-28 (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. Therefore, this EIR's finding that impacts to the coast horned lizard can be mitigated to a less than significant level is consistent with the finding set forth in the Newhall Ranch Specific Plan Program EIR. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Two-striped garter snake (*Thamnophis hammondi*). The two-striped garter snake is a California Species of Special Concern. Two-striped garter snakes are found in a variety of perennial and intermittent freshwater streams within oak woodlands, shrublands, and sparse coniferous forests from sea level to 2,400 meters (7,874 feet) AMSL (Stebbins 2003; Zeiner *et al.* 1988). This species was observed in the reach of the Santa Clara River within and adjacent to the Specific Plan area (Aquatic Consulting Services, Inc., 2002C; Impact Sciences, Inc., 2002; Compliance Biology, Inc., 2004; ENTRIX 2006B). The removal of riparian vegetation and construction activities associated with the proposed bridge and/or bank protection could result in impacts to individual two-striped garter snakes. This may be a significant impact, depending on the number and extent of this species that may be disturbed or removed. In order to reduce these impacts, the Project applicant would implement a series of mitigation measures designed to limit construction activities within high quality habitat areas and capture and relocate animals away from the work area prior to construction. Mitigation measures to reduce impacts below significant levels include **SP 4.6-53** (surveys for special-status species) and **SP 4.6-58** (require compliance with water quality permits). In addition, equipment would not be operated within areas of ponded or flowing water (unless otherwise approved by the Corps and CDFG) and water containing mud, silt, and other pollutants would not be allowed to enter flowing water. Further, any two-stripe garter snakes potentially present would be removed from the disturbance footprint by qualified biologists and placed in a pre approved area capable of supporting the species. The Project applicant would also conduct biological monitoring during ground disturbing activities in an effort to salvage animals that may be uncovered during construction activities. Other applicable mitigation measures recommended in this EIR include:

- **LV 4.4-10** (development of a Stream Crossing and Diversion Plan),
- **LV 4.4-11** (regulating stream diversion bypass channels and dewatering),
- **LV 4.4-12** (creation of habitat for special-status fish during construction),
- **LV 4.4-13** (installation of structures within the riverbed not to impair movement of aquatic life),
- **LV 4.4-14** (prevention of mud and pollutants from entering streams and storm flows),

- **LV 4.4-15** (restriction of construction activities in the riverbed to specified areas),
- **LV 4.4-16** (surveys of riverbed area for two-striped garter snake and south coast garter snake),
- **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities).

Implementation of the mitigation measures described above would reduce this impact to a level that is less than significant. The finding that impacts to two-striped garter snake can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Implementation of the proposed project would also result in the permanent loss of approximately 15 acres (22%) and temporary disturbance of approximately 53 acres (78%) of habitat for this species within the Landmark Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note that approximately 806 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

Cooper's hawk (*Accipiter cooperii*). The Cooper's hawk is on CDFG Watch List. Cooper's hawks are found in areas with dense stands of live oak, riparian, or other forest communities near water (Zeiner et al. 1990A). The Cooper's hawk frequents landscapes where wooded areas occur in patches and groves and often uses patchy woodlands and edges with snags for perching (Beebe 1974). The Cooper's hawk has been regularly observed within riparian and oak woodland habitats over multiple years during bird surveys conducted from 1988 through 2006 along the Santa Clara River (Guthrie 1988–1990, 1991A–B, 1992, 1993A–B, 1994A–B, 1995A–B, 1996A–B, 1997A–B, 1998A–B, 1999A–C, 2000B–C, 2000E–F, 2001A–B, 2002A, 2002C, 2003A–B, 2004F, 2004H–I, 2005A–B, 2006A–C; Labinger and Greaves 1995, 1996, 1997A–B; Labinger and Greaves 1999A). This species is known to be a year-round resident within the Project area (Bloom Biological, Inc. 2007A). If active hawk nests are present, the proposed removal of riparian vegetation and/or construction-related noise could cause the nests to be lost or abandoned during that year's nesting season. Depending on the number and extent of this species' bird nests on the site that may be disturbed or removed, the loss of active nests could be a significant impact. In order to reduce impacts to this species, the Project applicant would implement mitigation measures to reduce impacts to Cooper's hawk before and during construction. Previously incorporated mitigation measures include **SP 4.6-53** (updated site specific surveys) and **SP 4.6-59** (consultation with County and CDFG at important benchmarks). This impact would also be reduced through the implementation of Mitigation Measures **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-21** (pre-construction surveys for nesting

native bird species and construction setbacks for active nests). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. The finding that impacts to Cooper's hawk can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Implementation of the proposed project would also result in the permanent loss of approximately 167 acres (71%) for this species within the Landmark Village project site, including 8 acres of nesting and foraging habitat and 159 acres of foraging only habitat. The proposed project would result in temporary disturbance of approximately 68 acres (29%), including 31 acres of nesting and foraging habitat and 37 acres of foraging only habitat. Absent mitigation, this would be considered a significant impact. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note that approximately 3,623 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area, including 1,620 acres of nesting and foraging habitat and 2,003 acres of foraging only habitat.

Grasshopper sparrow (*Ammodramus savannarum*). The grasshopper sparrow has been designated by CDFG as a California Species of Special Concern. The species frequents dense, dry or well-drained grassland, especially native grassland with a mix of grasses and forbs for foraging and nesting. Grasshopper sparrows require fairly continuous native grassland areas with occasional taller grasses, forbs, or shrubs for song perches (Garrett and Dunn 1981). No observations of the grasshopper sparrow have been made within the Project area, but potential habitat exists on site. ~~Depending on the number and extent of this species'~~The project area is just south of the southern edge of the portion of this species' summer breeding range, which occurs at approximately the Los Angeles/Kern County boundary. If it were to nest on site, depending on the number and extent of this species' bird nests that may be disturbed or removed, the loss of active nests would be a potentially significant impact. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). This impact would also be reduced through the implementation of Mitigation Measures **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for active nests). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 39 acres (74%) and temporary disturbance of approximately 14 acres (26%) of habitat for this species within the Landmark Village project site. Approximately 660 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Although all on-site habitat would be impacted, the total impact would only be about 53 acres. Further, this species has not been observed

during surveys, and it is not expected to nest on site. In addition, a large amount of suitable grassland habitat would be protected and managed. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

Sharp-shinned hawk (*Accipiter striatus*). The sharp-shinned hawk is on CDFG Watch List. Sharp-shinned hawks prefer riparian forest and woodlands (NatureServe 2007). They are found in a variety of ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats (Joy et al. 1984; Zeiner *et al.* 1990A; NatureServe 2007). Sharp-shinned hawks have been observed several times during the course of the avian surveys conducted along the Santa Clara River corridor. Guthrie observed two adults on two separate occasions in 1995 and again in 1997 and 1999 (Guthrie 1995B, 1997A, 1999B). Another sharp-shinned hawk was observed in March 2007 by Bloom Biological (Bloom Biological, Inc., 2007A). Because sharp-shinned hawks are highly mobile and are a rare winter visitor on the site, the proposed Project would not result in mortality of individuals occupying this habitat during construction and/or grading activities. Furthermore, because the species does not nest on site, construction and grading activities associated with the proposed Project would not result in impacts to nesting birds of this species. Implementation of the proposed project would not directly impact this species. ~~The Newhall Ranch Specific Plan Program EIR concludes~~

Implementation of the proposed project would result in the permanent loss of approximately 709 acres (67%) and temporary disturbance of approximately 343 acres (33%) of habitat for this species within the Landmark Village project site. The Newhall Ranch Specific Plan Program EIR concluded that due to the substantial loss of habitat resulting from buildout of the Specific Plan, impacts to sharp-shinned hawk would be considered a significant unavoidable impact; however, the mitigation proposed in the Specific Plan EIR was not as extensive as this Recirculated Landmark Village EIR. For example, a total of 6,413,603 acres of potential suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Additional mitigation to that in the Newhall Ranch Specific Plan Program EIR includes LV 4.4-2 (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Landmark Village); LV 4.4-6 (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and LV 4.4-28 (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Tricolored blackbird (*Agelaius tricolor*). The tricolored blackbird is a California Species of Special Concern and a Bird of Conservation Concern with regard to its nesting colony status. It was petitioned for state and federal listing by the Center for Biological Diversity in 2004, but the USFWS made a decision not to

warrant protection in December 2006. These birds prefer to breed in freshwater marshes with dense growths of emergent vegetation dominated by cattails (*Typha* spp.) or bulrushes (*Schoenoplectus* spp.), but have also established colonies in willows (*Salix* spp.), blackberries (*Rubus* spp.), thistles (*Cirsium* and *Centaurea* spp.), and nettles (*Urtica* spp.). This species has been observed on the Project site during focused bird surveys. Labinger et al. (1995) observed a small nesting colony within the Project site; however, the specific location is not known and was not mapped. Migrants have also been observed within the Specific Plan area along the Santa Clara River (Guthrie 1996B, 1999B, County of Los Angeles 2003) and within Potrero Canyon in 1994 (County of Los Angeles 2003). Tricolored blackbird has been observed office along Castaic Creek (Guthrie 1994A, 1995A, 1996A, 1999A, 2006C), and at Castaic Junction (Guthrie 1994A, 2000E, 2001A, 2006C; Dudek 2006E). No breeding colonies have been observed since 1994, despite annual surveys through 2007 as described above. However, should this species nest on the site prior to development, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season.

Depending on the number and extent of bird nests on the site that may be disturbed or removed, the loss of active nests would be a potentially significant impact. In order to avoid impacts to this species, the Project applicant would implement mitigation measures to reduce the loss of or harm to tricolored blackbird before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). This impact would also be reduced through the implementation of Mitigation Measures **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for active nests). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

The Newhall Ranch Specific Plan Program EIR ~~concludes~~concluded that because the potential to successfully relocate breeding colonies at new locations is relatively low, impacts to breeding colonies (if present) would remain significant. However, given that no breeding colonies have been documented on or adjacent to the project site during annual bird surveys, and the requirements of proposed Mitigation Measures **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for active nests), impacts to nesting tricolored blackbird (if present) can be reduced to below a level of significance at the project level.

Although the proposed project would not affect potential wetland nesting habitat for this species, it would result in the permanent loss of approximately 253 acres (66%) of upland foraging habitat within the Landmark Village project site and temporary disturbance of approximately 253 acres (34%) of upland

foraging habitat for this species. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 1,195 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area, including 1.4 acres of suitable nesting habitat and 1,194 acres of upland foraging habitat.

Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*). The southern California rufous-crowned sparrow is on CDFG Watch List. This species is not federally listed as threatened or endangered within any part of its range (Collins 1999B). The rufous-crowned sparrow occupies moderate to steep hillsides that are rocky, grassy, or covered by coastal sage scrub or chaparral. The southern California rufous-crowned sparrow has been observed over multiple years as a fairly common resident in the coastal scrub within the Specific Plan area during annual bird surveys. It has been observed foraging upland and near the Santa Clara River (Guthrie 2000A, 2000B, 2001A, 2002C, 2004A, 2004D) and was observed nesting in 2007 (Bloom Biological, Inc., 2007A). Construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of this species' bird nests on the site that may be disturbed or removed, the loss of active nests would be a significant impact. In order to reduce impacts to this species, the Project applicant would implement mitigation measures to reduce impacts to Southern California rufous-crowned sparrow before and during construction. Previously incorporated mitigation measures include **SP 4.6-53** (updated site specific surveys) and **SP 4.6-59** (consultation with County and CDFG at important benchmarks). This impact would also be reduced through the implementation of Mitigation Measures **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for active nests). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 156 acres (85%) and temporary disturbance of approximately 27 acres (15%) of habitat for this species within the Landmark Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. See also, the discussion below regarding the large amount of suitable habitat that will be placed into permanent conservation easements as a result of the Project. ~~Note also that approximately 113 acres (15%) of suitable habitat on site would not be impacted and approximately 1,986 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.~~

The Newhall Ranch Specific Plan Program EIR ~~concludes~~ concluded that due to the substantial loss of habitat resulting from buildout of the Specific Plan, impacts to Southern California rufous-crowned sparrow would be considered unavoidably significant impact; however, the mitigation proposed in the Specific Plan EIR was not as extensive as this Recirculated Landmark Village EIR. See **Subsection 9.b.(1)(b), Wildlife Habitat Loss**, for a discussion of project-related impacts to special-status wildlife due to habitat loss. In addition to the mitigation measures described above, a total of 6,113,986 acres of potential suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Additional mitigation to that in the Newhall Ranch Specific Plan Program EIR includes LV 4.4-2 (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Landmark Village); LV 4.4-6 (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and LV 4.4-28 (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Golden eagle (*Aquila chrysaetos*). The golden eagle is on CDFG Watch List and a Fully Protected species. The golden eagle requires rolling foothills, mountain terrain, and wide arid plateaus deeply cut by streams and canyons, open mountain slopes and cliffs, and rock outcrops (Zeiner *et al.* 1990A). On site, this species has occasionally been observed during annual bird surveys conducted from 1988 through 2007 along the Santa Clara River. A golden eagle was observed flying over the Santa Clara River in the vicinity of the Six Flags Magic Mountain Amusement Park within the Entrada planning area (Guthrie 1993A, 1993B). No known nests occur on site or in the immediate vicinity and the project site is not considered suitable for nesting eagles. However, suitable foraging habitat occurs on the project site. Because this species is not expected to nest or otherwise substantially utilize the project site, no significant impacts to golden eagle are expected to occur as a result of the Landmark Village development. Despite no significant impacts, applicable mitigation measures include previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). Any impacts also would be reduced through the implementation of Mitigation Measures **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for active nests). Implementation of these mitigation measures would avoid impacts to nesting golden eagle if nests were located in the future.

Implementation of the proposed project would result in the permanent loss of approximately 576 acres (67%) and temporary disturbance of approximately 284 acres (33%) of potential foraging habitat for this species within the Landmark Village project site. Absent mitigation, these impacts would be considered significant. Note, however, that approximately 4,085 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The Newhall Ranch Specific Plan Program EIR concluded that due to the substantial loss of habitat, and potential impacts to individuals resulting from buildout of the Specific Plan, impacts to golden eagle would be considered significant and unavoidable; however, because the species is not expected to nest or otherwise substantially utilize the Landmark Village project site, as stated above, no significant impacts to golden eagle are expected to occur as a result of the Landmark Village development. ~~In addition, since~~ However, significant impact to potential foraging habitat would occur. Since the Newhall Ranch Specific Plan Program EIR was certified, new mitigation measures have been added to the Landmark Village Recirculated EIR. Those measures, referenced above and discussed in **Wildlife Habitat Loss**, ensure that any impacts to golden eagle are minimized to less-than-significant levels.

Short-eared owl (*Asio flammeus*). The short-eared owl is a federally listed Bird of Conservation Concern as well as a CDFG-designated California Species of Special Concern. The short-eared owl is a resident of mixed and tall grass habitats. The species is usually found in open areas with few trees, such as annual and perennial grasslands, prairies, tundra, dunes, meadows, agricultural lands, and saline and fresh emergent wetlands (Zeiner *et al.* 1990A; Terres 1980). Short-eared owls have never been documented in the Project area. However, an individual was observed just outside the Project boundary in the Salt Creek area just west of the Ventura/Los Angeles County line in the fall of 2005 (Dudek 2006B). Short-eared owl could potentially forage on site in grasslands during the winter months. Because short-eared owls are highly mobile and are a rare winter visitor on the site, the proposed Project would not result in impacts to individuals occupying this habitat during construction and/or grading activities. Furthermore, because the species does not nest on site, construction and grading activities associated with the proposed Project would not result in impacts to young or eggs. Implementation of the proposed project would not directly impact this species. ~~Impacts~~

Implementation of the proposed project would result in the permanent loss of approximately 397 acres (82%) and temporary disturbance of approximately 87 acres (18%) of potential winter foraging habitat for this species within the Landmark Village project site. Approximately 1,498 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Although a large percentage of potential winter foraging habitat for this species would be affected, this species is a highly mobile and rare winter visitor in the project area. The 1,498 acres of protected and managed habitat would provide substantial suitable habitat for the small number of short-eared owls that visit the area. Because the species occurs rarely in the project vicinity, the permanent loss and temporary

disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

Note that impactsImpacts to this species were not addressed by the Newhall Ranch Specific Plan Program EIR due to more recent identification of the species in later surveys. See **Subsection 9.b.(1)(b), Wildlife Habitat Loss**, for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Long-eared owl (*Asio otus*). The long-eared owl has been designated by CDFG as a California Species of Special Concern. The long-eared owl primarily uses riparian habitat for roosting and nesting, but can also use live oak thickets and other dense stands of trees (Zeiner et al. 1990A). It appears to be more associated with forest edge habitat than with open habitat or forest habitat (Holt 1997). Dudek observed a long-eared owl during wildlife transect surveys within the Specific Plan area in live oak woodland south of Via Canyon during fall 2005 (Dudek 2006B). The observed individual was not nesting. The species was not observed during 2007 surveys despite several nights spent camping in oak woodlands surrounding the Landmark Village project area (Bloom Biological, Inc. 2007A). Should this species occur on the site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of bird nests on site that may be disturbed or removed, the loss of active nests could be a significant impact. The Project applicant would implement mitigation measures to reduce impacts to long-eared owl before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). This impact would also be reduced through the implementation of Mitigation Measures **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for active nests). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 405 acres (78%) within the Landmark Village project site, including 8 acres of nesting habitat and 397 acres of foraging only habitat for long-eared owl. The proposed project would result in temporary disturbance of approximately 115 acres (22%) of habitat for this species, including 31 acres of nesting habitat and 84 acres of foraging only habitat. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 2,494 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area, including 1,179 acres of nesting habitat and 1,315 acres of foraging only habitat.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Western burrowing owl (*Athene cunicularia hypugaea*). The western burrowing owl is a Bird of Conservation Concern and designated by CDFG as a California Species of Special Concern. In California, western burrowing owls are yearlong residents of flat, open, dry grassland and desert habitats at lower elevations (Bates 2006). They can inhabit annual and perennial grasslands and scrublands characterized by low-growing vegetation. On site, the western burrowing owl has been observed anecdotally at two locations. A single western burrowing owl individual was observed twice at the same location within a four-week period (November and December 2006) in the northern portion of Middle Canyon, east of Airport Mesa, in ruderal habitat. Another individual was observed in December 2006 in Middle Canyon, and again on April 11, 2007 (Miller 2007). Construction-related activities could result in the loss or abandonment of active burrows. Depending on the number and extent of active burrows on the site that may be disturbed or removed, the loss of active burrows could be a significant impact. The Project applicant would implement mitigation measures to reduce impacts to western burrowing owl before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). This impact would also be reduced through the implementation of Mitigation Measures **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-22** (pre-construction surveys for burrowing owl). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 480 acres (66%) and temporary disturbance of approximately 250 acres (34%) of habitat for this species within the Landmark Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. See also, the discussion below regarding the large amount of suitable habitat that will be placed into permanent conservation easements as a result of the Project. Note also that approximately 31 acres (4%) of suitable habitat on site would not be impacted and approximately 1,009 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The Newhall Ranch Specific Plan Program EIR concludes that due to the substantial loss of habitat, and potential impacts to individuals resulting from buildout of the Specific Plan, impacts to western burrowing owl would be considered a significant unavoidable impact; however, the mitigation proposed in the Specific Plan EIR was not as extensive as this Recirculated Landmark Village EIR. See **Subsection 9.b.(1)(b), Wildlife Habitat Loss**, for a discussion of project-related impacts to special-status wildlife due

to habitat loss. In addition to the mitigation measures described above, a total of 6,113,009 acres of potential suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Additional mitigation to that in the Newhall Ranch Specific Plan Program EIR includes LV 4.4-2 (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Landmark Village); LV 4.4-6 (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and LV 4.4-28 (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Oak titmouse (*Baeolophus inornatus*). The oak titmouse is designated by CDFG as a California Special Animal. This species is not federally listed as threatened or endangered within any part of its range. Oak titmice inhabit a variety of habitat types, but are primarily associated with oaks, especially those in warm, dry habitats (Cicero 2000). The oak titmouse is common and abundant in the Project area, nesting on site in cottonwood riparian and coast live oak communities. It has been observed over multiple years along the Santa Clara River in the Specific Plan area. The oak titmouse was observed most recently by Guthrie in 2006 (Guthrie 2006C) and by Bloom Biological in 2007 (Bloom Biological, Inc., 2007A). Bloom Biological reported seeing between two and 14 individuals of this species daily. Most observations of this species were not mapped, but individuals have been sighted along the Santa Clara River and its tributaries. Construction-related activities could result in the loss or abandonment of active nests during that year's nesting season.

Depending on the number and extent of bird nests on the site that may be disturbed or removed, the loss of active nests would be a significant impact. In order to avoid impacts to this species, the Project applicant would implement mitigation measures to reduce impacts to oak titmouse before and during construction. Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (require surveys of special-status species within the Project site). This impact would also be reduced through the implementation of Mitigation Measures **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for active nests). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 8.1 acres (23%) and temporary disturbance of approximately 27 acres (77%) of habitat for this species within

the Landmark Village project site. Approximately 1,573 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. The oak titmouse is still common and abundant in the project vicinity, a relatively small amount of habitat would be affected. Further, a substantial amount of habitat would be protected and managed. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Ferruginous hawk (*Buteo regalis*). The ferruginous hawk is on CDFG Watch List is a Bird of Conservation Concern. The ferruginous hawk forages in open grasslands, agriculture, sagebrush flats, desert scrub, surrounding valleys in low foothills, and fringes of pinyon-juniper habitats (Polite and Pratt 1999). On site, has been observed in the eastern alfalfa fields, Wolcott agricultural fields, Potrero Canyon, and other agriculture fields along the Santa Clara River in winter 2008 (Bloom Biological, Inc. 2008). The Project area is outside of the species' breeding range and it is not expected to nest on site. Because ferruginous hawks are highly mobile and are a winter visitor on the site, the proposed Project would not result in mortality of individuals occupying this habitat during construction and/or grading activities. Furthermore, because the species does not nest on site, construction and grading activities associated with the proposed Project would not result in impacts to young or eggs of this species. Implementation of the proposed project would not directly impact this species.

Implementation of the proposed project would result in the permanent loss of approximately 582 acres (67%) and temporary disturbance of approximately 289 acres (33%) of potential winter foraging habitat for this species within the Landmark Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. See also, the discussion below regarding the large amount of suitable habitat that will be placed into permanent conservation easements as a result of the Project. Note also that approximately 145 acres (10%) of potential winter foraging habitat on site would not be impacted and approximately 3,012 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The Newhall Ranch Specific Plan Program EIR concludes that due to the substantial loss of habitat resulting from buildout of the Specific Plan, impacts to ferruginous hawk would be considered a significant unavoidable impact; however, the mitigation proposed in the Specific Plan EIR was not as extensive as this Recirculated Landmark Village EIR. For example, a total of 6,113,012 acres of

potentially suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Additional mitigation to that in the Newhall Ranch Specific Plan Program EIR includes LV 4.4-2 (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Landmark Village); LV 4.4-6 (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and LV 4.4-28 (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Costa's hummingbird (*Calypte costae*). The Costa's hummingbird is designated by CDFG as a California Special Animal. It has a CNDDDB ranking of global: demonstrably widespread, abundant, and secure; subnational: vulnerable to extirpation or extinction. It is not federally listed as threatened or endangered within any part of its range. Primary habitats are desert wash, edges of desert riparian and valley foothill riparian areas, coastal scrub, desert scrub, desert succulent scrub, lower-elevation chaparral, and palm oasis (Zeiner et al. 1990A). The species has been observed over multiple years during bird surveys conducted from 1988 through 2006 along the Santa Clara River within riparian scrub and woodland habitat; however, there are no mapped locations for observations. This species likely occurs as a migrant and could nest in suitable habitats on the borrow and grading sites. If nesting were to occur within or adjacent to the project site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of nests on the site that may be disturbed or removed, the loss of active nests could be a significant impact. Implementation of proposed Mitigation Measure LV 4.4-21 (pre-construction surveys for nesting native bird species and construction setbacks for active nests) would reduce impacts to nesting hummingbirds to below a level of significance. Impacts to this species were not previously analyzed in the Newhall Ranch Specific Plan Program EIR.

Implementation of the proposed project would also result in the permanent loss of approximately 218 acres (74%) and temporary disturbance of approximately 75 acres (26%) of habitat for this species within the Landmark Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 3,871 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

Lawrence's goldfinch (*Carduelis lawrencei*). The Lawrence's goldfinch is designated by CDFG as a California Special Animal. Additionally, this species is recognized under the NatureServe system of Natural Heritage Programs as vulnerable at the state level within California and throughout its range and

is listed as a Bird of Conservation Concern by the USFWS. Lawrence's goldfinches are found in cropland and hedgerows, shrubland and chaparral, conifer, hardwood and mixed woodlands (NatureServe 2007). On site, this species was observed in upland areas and riparian thickets in 2007 (Bloom Biological, Inc., 2007A) and has been observed over multiple years during the bird surveys conducted from 1988 through 2006 along the Santa Clara River (Compliance Biology 2006A; Guthrie 1988, 1990, 1992, 1993A–B, 1994A, 1996A–B, 1997A–B, 1998A–B, 1999A–B, 2000A–G, 2001A–B, 2002A, 2002C, 2003A–B, 2004C–E, 2004H–I, 2006C; Labinger *et al.* 1996, 1997A–B; Labinger and Greaves 1999A). Two to 70 were recorded daily throughout March, mostly in migrant flocks (Bloom Biological, Inc., 2007A). If present, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of bird nests on the site that may be disturbed or removed, the loss of active nests would be a significant impact. In order to avoid impacts to this species, the Project applicant would implement mitigation measures to reduce impacts to Lawrence's goldfinch before and during construction. Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (require surveys of special-status species within the Project site). This impact would also be reduced through the implementation of Mitigation Measures **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for active nests). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 214 acres (76%) within the Landmark Village project site, including 8.1 acres of nesting and foraging habitat and 206 acres of foraging only habitat. The proposed project would also result in the temporary disturbance of approximately 69 acres (24%) of habitat for this species, including 31 acres of foraging and nesting habitat and 38 acres of foraging only habitat. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 4,663 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area, including 1,179 acres of nesting and foraging habitat and 3,484 acres of foraging only habitat.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Turkey vulture (*Cathartes aura*). Although the turkey vulture has no federal or state status, it is being discussed, for the purposes of this report, as a CDFG trust resource. Turkey vultures use a variety of habitats while foraging for both wild and domestic carrion. They prefer open stages of most habitats. In

the western United States, they tend to occur regularly in areas of hilly pastured rangeland, nonintensive agriculture, and areas with rock outcrops suitable for nesting, although they are not generally found in high-elevation mountain areas (Kirk and Mossman 1998; Zeiner *et al.* 1990A). On site, this species has been observed over multiple years during bird surveys conducted from 1988 through 2007 along the Santa Clara River (Guthrie 1993B, 1994B, 1996B, 1997B, 1999B–C, 2000A–B, 2000E–F, 2001A–B, 2002A, 2003B, 2004A, 2004D–F, 2004H, 2005B, 2006A), Dudek (2006B, 2008B), Labinger *et al.* (1995, 1997A–B), and Bloom Biological, Inc. (2007); and off site in the Castaic Junction area by Guthrie (1988, 1990, 1991A, 1993A, 1994A, 1995A, 1996A, 1997A, 1998A, 1999A, 2001A, 2002A, 2003A, 2004I, 2005A, 2006C) and Haglund and Baskin (2000). However, no mapped occurrences of this species were recorded. If present, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of bird nests on the site that may be disturbed or removed, the loss of active nests would be a significant impact. In order to avoid impacts to this species, the project applicant would implement mitigation measures to reduce impacts to turkey vulture before and during construction. Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (require surveys of special-status species within the Project site). This impact would also be reduced through the implementation of Mitigation Measures **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for active nests). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 647 acres (69%) of foraging habitat within the Landmark Village project site. The proposed project would also result in temporary disturbance of approximately 290 acres (31%) of foraging habitat for this species. Approximately approximately 4,283 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area, including 848 acres of the potential nesting/roosting habitat, 413 acres of habitat suitable for nesting/roosting and foraging, and 3,022 acres of foraging only habitat. Although a relatively large amount of foraging habitat would be affected, this species is still common and widespread in its range and has no state or federal status. A large amount (3,022 acres) of foraging habitat would be protected and managed, and this species is expected to continue using the project region for foraging in the future. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

Northern harrier (*Circus cyaneus*). The northern harrier has been designated by CDFG as a California Species of Special Concern. Northern harriers use a wide variety of open habitats in California, including

deserts, coastal sand dunes, pasturelands, croplands, dry plains, grasslands, estuaries, flood plains, and marshes (Macwhirter and Bildstein 1996). The species can also forage over coastal sage scrub or other open scrub communities (Bloom Biological, Inc., 2007A). The northern harrier has been observed in or near the Project area infrequently during the 20 years when surveys were conducted (Guthrie 1999B, 2000A). More recently, Dudek observed a northern harrier in the Mission Village area (Dudek 2008B), and in March 2007, Bloom Biological made three separate observations of a single male at different locations in or near the Project area along the Santa Clara River (Bloom Biological, Inc. 2007A). While no active nests were observed during surveys, suitable nesting habitat occurs in association with the agricultural and grassland habitats on site. Should this species nest on the project site, construction-related activities could result in the loss or abandonment of active nests. Depending on the number and extent of this species' active nests on site that may be disturbed or removed, the loss of active nests would be a significant impact. In order to avoid impacts to this species, the Project applicant would implement mitigation measures to reduce impacts to the northern harrier before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** (requiring updated surveys of special-status species within the Project area) and **SP 4.6-59** (consultation with Los Angeles County and CDFG at important benchmarks). This impact would also be reduced by the implementation of Mitigation Measures **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for active nests). Implementation of these mitigation measures would reduce this impact to a level that is not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 563 acres (80%) within the Landmark Village project site, including 397 acres of nesting and foraging habitat and 166 acres of foraging only habitat. The proposed project would also result in the temporary disturbance of approximately 140 acres (20%) of habitat for this species, including 87 acres of nesting and foraging habitat and 53 acres of foraging only habitat. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also approximately 4,695 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area, including 1,501 acres of nesting and foraging habitat and 3,194 acres of foraging only habitat.

The Newhall Ranch Specific Plan Program EIR ~~concludes~~concluded that due to the substantial loss of habitat resulting from buildout of the Specific Plan, impacts to northern harrier would be considered a significant unavoidable impact; however, the mitigation proposed in the Specific Plan EIR was not as extensive as this Recirculated Landmark Village EIR. See **Subsection 9.b.(1)(b), Wildlife Habitat Loss**, for a discussion of project-related impacts to special-status wildlife due to habitat loss. In addition to the

mitigation measures described above, a total of 6,1134,695 acres of potential suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Additional mitigation to that in the Newhall Ranch Specific Plan Program EIR includes LV 4.4-2 (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Landmark Village); LV 4.4-6 (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and LV 4.4-28 (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*). The western yellow-billed cuckoo is a candidate for listing under the federal ESA, is a CESA-listed endangered species, and is a Bird of Conservation Concern with regard to its nesting status. The eastern yellow-billed cuckoo prefers a diverse variety of habitats, including open woodland with clearings and low, dense, scrubby vegetation as well as abandoned farmland, overgrown fruit orchards, successional shrubland, dense thickets along streams and marshes, shade trees, and gardens (Hughes 1999). The habitat preference of the western yellow-billed cuckoo, in contrast, is much more restricted in both species composition and size of the patch of preferred habitat. The habitat of the western yellow-billed cuckoo primarily consists of large blocks of riparian habitat, particularly cottonwood–willow riparian woodlands (66 FR 38611–38626). The western yellow-billed cuckoo has occasionally been documented within the Santa Clara River corridor during focused bird surveys in the NRSP area, although the locations of these observations were not mapped. Single individuals (thought to be migrants) were observed along the Santa Clara River east of the Project site in 1997 and 1998 (Guthrie 1997A; Labinger *et al.* 1997B; Labinger and Greaves 1999A) and west of the Ventura county line in 1997 (Guthrie 1997B). However, none have been observed in the Project area since then. In addition, suitable habitat does occur in association with the riparian habitats on site, and western yellow-billed cuckoo could nest in those areas. Should this species occur on the site, construction-related activities could result in the loss or abandonment of active nests. Depending on the number and extent of active nests on site that may be disturbed or removed, the loss of active nests could be a significant impact. The Project applicant would implement mitigation measures to reduce impacts to yellow-billed cuckoo before and during construction. Applicable mitigation measures include previously incorporated measures SP 4.6-53 and SP 4.6-59 (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). This impact would also be reduced through the implementation of Mitigation Measures LV 4.4-18 (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities),

~~and LV 4.4-21 (pre-construction surveys for nesting native bird species and construction setbacks for active nests), and LV 4.4-61 (replace or enhance nesting and foraging habitat for least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, and coastal California gnatcatcher).~~ Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 4.9 acres (14%) and temporary disturbance of approximately 31 acres (86%) of habitat for this species within the Landmark Village project site. Approximately approximately 331 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Due to large habitat losses in California, the yellow-billed cuckoo is listed as endangered under CESA. As a result, even small amounts of habitat loss are substantially adverse. Therefore, the project's impacts on habitat suitable for the yellow-billed cuckoo would be significant absent mitigation. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Yellow warbler (*Dendroica petechia brewsteri*). The yellow warbler has no federal or state sensitivity status but is designated as a California Species of Special Concern by CDFG. In general, the yellow warbler breeds most commonly in wet, deciduous thickets, especially those dominated by willows, and in disturbed and early successional habitats (Lowther *et al.* 1999). A single migrant was observed in the Entrada planning area in 2000 (Guthrie 2000D). If present, the proposed removal of riparian vegetation and/or construction-related noise could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of bird nests on the site that may be disturbed or removed, the loss of active nests would be a significant impact. In order to avoid impacts to this species, the Project applicant would implement mitigation measures to reduce impacts to the yellow warbler before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** (special-status species presence/absence survey requirements) and **SP 4.6-59** (consultation with the CDFG prior to surveys to establish appropriate survey methodology). This impact would also be reduced through the implementation of Mitigation Measures **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for active nests). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. The finding that impacts to yellow warbler can be

reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Implementation of the proposed project would also result in the permanent loss of approximately 4.9 acres (14%) and temporary disturbance of approximately 31 acres (86%) of habitat for this species within the Landmark Village project site. Approximately 331 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Although the project would affect a relatively small amount of yellow warbler habitat, this impact, absent mitigation, would be significant because: (1) it would contribute to the large loss of riparian habitat in Southern California, (2) this species is declining in California, and (3) this species is likely to nest on site. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to less than significant.

White-tailed kite (*Elanus leucurus*). The white-tailed kite is a California Fully Protected species. The white-tailed kite is commonly associated with agriculture areas (Grinnell and Miller 1944). It also inhabits low-elevation grasslands, savannah-like habitats, open sage scrub, meadows, wetlands, and oak woodlands, particularly in areas with a dense population of voles (Waian and Stendell 1970). On the project site, white-tailed kite has been observed primarily along the Santa Clara River, where it nests in associated riparian woodlands and forages in adjacent grasslands, open sage scrub, and agricultural fields (Guthrie 2005C; Bloom Biological, Inc., 2007A, 2009). It has been observed within the Specific Plan, including High Country SMA/SEA 20 and Salt Creek (Guthrie 1994B, 1995B, 1996B, 1997B, 1998A, 1999B, 2000A–C, 2002C, 2003B, 2004D, 2004F; Labinger *et al.* 1995, 1996, 1997A–B; Labinger and Greaves 1999A; Dudek 2006B; Bloom Biological, Inc. 2007A); and off site within Castaic Junction (Guthrie 1988–1990, 1993A, 1994A, 1995A, 1998B, 1999A, 2000E, 2001A, 2003A, 2004F, 2005A, 2006C; Dudek 2006E; Bloom Biological, Inc., 2007A) and within the Santa Clara River and adjacent agricultural areas just upstream of Las Brisas Bridge in Ventura County and just west of the Ventura/Los Angeles County line (Bloom Biological, Inc. 2009).

If nesting kites are present during construction, construction-related activities could adversely affect kites during that year's nesting season. Due to the kite's status as a California Fully Protected species, project impacts on active nests would be a significant impact. In order to avoid such impacts, the Project applicant would implement mitigation measures to reduce impacts to the white-tailed kite before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** (special-status species presence/absence survey requirements) and **SP 4.6-59** (consultation with the CDFG prior to surveys to establish appropriate survey methodology). This impact would also be reduced through the implementation of Mitigation Measures **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for

active nests). Implementation of these mitigation measures would avoid impacts to nesting white-tailed kites.

Implementation of the proposed project would also result in the permanent loss of approximately 552 acres (80%) within the Landmark Village project site, including 8 acres of nesting habitat and 544 acres of foraging habitat. The proposed project would also result in the temporary disturbance of approximately 142 acres (20%) of habitat for this species, including 31 acres of nesting habitat and 111 acres of foraging habitat. Approximately 4,421 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area, including 1,546 acres of nesting habitat and 2,875 acres of foraging habitat.

The Newhall Ranch Specific Plan Program EIR ~~concludes~~concluded that due to the substantial loss of habitat resulting from buildout of the Specific Plan, impacts to white-tailed kite would be considered a significant unavoidable impact; however, the mitigation proposed in the Specific Plan EIR was not as extensive as this Recirculated Landmark Village EIR. See **Subsection 9.b.(1)(b), Wildlife Habitat Loss**, for a discussion of project-related impacts to special-status wildlife due to habitat loss. A total of 6,113,421 acres of potential nesting and foraging habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. In addition to the mitigation measures set forth in the Newhall Ranch Specific Plan Program EIR, this EIR includes the following mitigation measures which, when implemented, will reduce impacts to flycatcher: LV 4.4-2 (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Landmark Village); LV 4.4-6 (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and LV 4.4-28 (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Willow flycatcher (*Empidonax traillii*)/**Southwestern willow flycatcher** (*E. t. extimus*). The full species of willow flycatcher, including the southwestern willow flycatcher, little willow flycatcher (*E. t. brewsteri*), and *E. t. adastus* (no common name other than willow flycatcher) subspecies, was listed as state endangered by CDFG in 1991. The subspecies southwestern willow flycatcher was listed as federally endangered species by the USFWS in 1995. The willow flycatcher has been detected almost every year within the River corridor in the Project area during the focused bird surveys. However, because all observations were early in the breeding season and no observations occurred after June 22, indicating nesting on site, all individuals are assumed to have been migrants and were probably either the little

willow flycatcher or *E. t. adastus*. No southwestern willow flycatchers have been observed to nest on site. Along the Santa Clara River in the NRSP, willow flycatchers were observed by Guthrie (1993B, 1997B, 1998A, 1999B, 2000C, 2001B, 2002C, 2004H, 2005B), Labinger *et al.* (1995), and Bloom Biological, Inc., (2007A); along Castaic Creek in VCC by Guthrie (1988, 1990, 2000E, 2001A, 2002A, 2003A, 2004F, 2005A); and adjacent to Entrada in the Castaic Junction area by Guthrie (1990, 1997A, 1999A, 2000E, 2002A, 2003A, 2006C) and Dudek (2006E). No southwestern willow flycatchers exhibiting nesting, paired, or territorial behavior have been observed in the Project site or vicinity. The most recent observation of the southwestern willow flycatcher displaying territorial behavior is downstream approximately 18 miles, near Saticoy (Labinger and Greaves 1999A). The CNDDDB (CDFG 2007, Recirculated Draft EIR, **Appendix 4.4**) lists one occurrence of nesting southwestern willow flycatchers in the Santa Clara River corridor upstream of the Project area, along Soledad Canyon Road near Agua Dulce, in 1997. A single willow flycatcher was observed east of the project site foraging along the Santa Clara River on May 31, 2004 (Guthrie 2004); however, given the timing of this observation and lacking any subsequent evidence of nesting, the observed willow flycatcher cannot be positively identified as belonging to the southwestern category of willow flycatchers (Guthrie 2004). Similarly, several adult willow flycatchers were observed during recent surveys, but no nesting was confirmed (Bloom 2007). However, as suitable nesting habitat does occur in association with the riparian habitats on site, southwestern willow flycatcher could nest in those areas. Should this species occur on site, construction-related activities could result in the loss or abandonment of active nests. The loss of active nests would be a significant impact. The Project applicant would implement mitigation measures to reduce or avoid impacts to southwestern willow flycatcher before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). This impact would also be reduced through the implementation of Mitigation Measures **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities), ~~and LV 4.4-21~~ (pre-construction surveys for nesting native bird species and construction setbacks for active nests), and LV 4.4-61 (replace or enhance nesting and foraging habitat for least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, and coastal California gnatcatcher). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. The finding that impacts to southwestern willow flycatcher can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Implementation of the proposed project would also result in the permanent loss of approximately 4.9 acres (14%) and temporary disturbance of approximately 31 acres (86%) of habitat for the willow flycatcher within the Landmark Village project site. Approximately 331 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Due in part to large habitat losses in California, this species is listed as endangered under both FESA and CESA. For

this reason, even small amounts of habitat loss are substantially adverse. Therefore, the project's impacts on suitable habitat for this species would be significant, absent mitigation. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant.

California horned lark (*Eremophila alpestris actia*). The California horned lark is on CDFG Watch List. California horned larks are common and abundant residents in a variety of open habitats, usually where trees and shrubs are absent. California horned larks have been observed regularly foraging in plowed and graded fields near the Santa Clara River within the NRSP Project area Guthrie (1994B, 1995B, 1996B, 1998A, 1999B–C, 2000A–C, 2005B), Labinger *et al.* (1995, 1996, 1997B; Labinger and Greaves 1999A), and Bloom Biological, Inc. (2007A); in the VCC planning area (Guthrie 1990, 1991B, 1992, 1996B, 1997B, 2000C, 2001A, 2002A, 2003A, 2004B, 2005A–B, 2006C; Dudek 2006D); and off site in the Castaic Junction area (Guthrie 1991B, 1993A, 1994A–B, 1995B, 2000F, 2003A, 2004, 2005A). More recent surveys have observed several individuals in the agricultural fields along the Santa Clara River and a flock of approximately 20 individuals was observed adjacent to the Project site foraging in a dirt agricultural field within the Landmark Village impact area (Bloom Biological, Inc., 2007A). Should this species nest on the project site, construction-related activities could result in the loss or abandonment of active nests. Depending on the number and extent of active nests on site that may be disturbed or removed, the loss of active nests could be a significant impact. In order to avoid such impacts, the Project applicant would implement mitigation measures to reduce impacts to the California horned lark before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** (special-status species presence/absence survey requirements) and **SP 4.6-59** (consultation with the CDFG prior to surveys to establish appropriate survey methodology). This impact would also be reduced through the implementation of Mitigation Measures **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for active nests). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. Impacts to this species were not addressed by the Newhall Ranch Specific Plan Program EIR due to more recent identification of the species in later surveys.

Implementation of the proposed project would also result in the permanent loss of approximately 480 acres (66%) and temporary disturbance of approximately 250 acres (34%) of habitat for this species within the Landmark Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that 1,009 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

Merlin (*Falco columbarius*). The merlin is on CDFG Watch List. The merlin uses a wide variety of semi-open to open habitats during breeding and wintering (Garrett and Dunn 1981; Sodhi *et al.* 2005). Individuals frequent coastlines, grasslands, savannahs, open woodlands, lakes, wetlands, edges, and communities in early successional stages while foraging. In 2007, Bloom Biological made four observations of wintering or migrating merlins between March 4 and March 23 (Bloom Biological, Inc., 2007A). One male and one female were documented hunting over agriculture fields bordering riparian habitat near Indian Dunes, which is located east of the Landmark Village site in the Specific Plan area. Merlins were not observed during bird surveys in any other year between 1988 and 2007. Merlins are highly mobile and visit the site only during the winter. For these reasons, the proposed project would not result in mortality of individuals occupying this habitat during construction and/or grading activities. Furthermore, because the species does not nest on site, construction and grading activities associated with the proposed project would not result in impacts to young birds or eggs. Implementation of the proposed project would not directly impact this species. Impacts to this species were not addressed by the Newhall Ranch Specific Plan Program EIR due to more recent identification of the species in later surveys.

Implementation of the proposed project would also result in the permanent loss of approximately 503 acres (62%) and temporary disturbance of approximately 305 acres (38%) of habitat for this species within the Landmark Village project site. Approximately 3,115 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. This species does not nest in or regularly use the project vicinity (individuals were only observed in 2007), is still widespread, and forages in a variety of habitats. Further, substantial habitat would be protected and managed in the area. The merlin would be expected to still occasionally use the area for foraging. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

Prairie falcon (*Falco mexicanus*). North America's only endemic falcon, the prairie falcon is a Bird of Conservation Concern and is on CDFG Watch List. Additionally, the prairie falcon is a migratory bird protected under the Migratory Bird Treaty Act (16 U.S.C. § 703 *et seq.*) and the USFWS identified the prairie falcon as a Bird of Conservation Concern (USFWS 2002B). Prairie falcons inhabit open habitats in North America, including arid plains and steppe habitats. In the western states they prefer chaparral, desert grasslands, and creosote bush habitats. Surveys conducted by Guthrie detected two individual prairie falcons foraging during various surveys; one prairie falcon was detected on April 7, 2000, in the Potrero Canyon and Long Canyon area, and the other on July 2, 2001, along Castaic Creek between the confluence with the Santa Clara River and I-5 (Guthrie 2000D, 2001A). Dudek biologists detected a prairie falcon within the Salt Creek watershed in late November 2005 and an incidental sighting was made in

late August 2007 over Salt Creek within the High Country SMA/SEA 20 (Dudek and Associates, Inc., 2006B; Trow, personal observation, 2007). Prairie falcons are highly mobile and visit the site only during the winter. For these reasons, the proposed project would not result in mortality of individuals occupying this habitat during construction and/or grading activities. Furthermore, because the species does not nest on site, construction and grading activities associated with the proposed project would not result in impacts to young birds or eggs. Implementation of the proposed project would not directly impact this species. Impacts to this species were not addressed by the Newhall Ranch Specific Plan Program EIR due to more recent identification of the species in later surveys.

Implementation of the proposed project would also result in the permanent loss of approximately 480 acres (66%) and temporary disturbance of approximately 250 acres (34%) of habitat for this species within the Landmark Village project site. Approximately 1,423 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. This species does not nest in project vicinity, is still widespread, and forages in a variety of habitats. Further, substantial habitat would be protected and managed in the area. The prairie falcon would be expected to still occasionally use the area for foraging. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

American peregrine falcon (*Falco peregrinus anatum*). A subspecies of the peregrine falcon, the American peregrine falcon is ~~listed as endangered under the California Endangered Species Act (CESA) and is also a California Fully Protected species. On October 11, 2007, the California Fish and Game Commission designated the American peregrine falcon as a candidate for delisting under CESA (California Regulatory Notice Register 2007, p. 1856).~~ Peregrine falcons in general use a large variety of open habitats for foraging, including tundra, marshes, seacoasts, savannahs, grasslands, meadows, open woodlands, and agricultural areas. One American peregrine falcon was observed hunting along the Santa Clara River Corridor near the Grapevine Mesa area within the Specific Plan area by Guthrie in July 2000 (Guthrie 2000C). No other occurrences of this species have been documented on site during annual bird surveys between 1988 and 2007. American peregrine falcons have never been documented nesting on the Project site. American peregrine falcons are highly mobile and visit the site only during the winter. For these reasons, the proposed Project would not result in mortality of individuals occupying this habitat during construction and/or grading activities. Furthermore, because the species does not nest on site, construction and grading activities associated with the proposed project would not result in impacts to young or eggs. Implementation of the proposed project would not directly impact this species. Impacts to this species were not addressed by the Newhall Ranch Specific Plan Program EIR due to more recent identification of the species in later surveys.

Implementation of the proposed project would result in the permanent loss of approximately 402 acres (78%) and temporary disturbance of approximately 111 acres (22%) of habitat for this species within the Landmark Village project site. Approximately 1,218 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. This species does not nest in the project vicinity, may occur throughout the non-desert areas of California during the non-breeding season, forages in a variety of habitats. Further, substantial habitat would be protected and managed in the area. The peregrine falcon would be expected to still occasionally use the area for foraging. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

California condor (*Gymnogyps californianus*). The California condor is federally and state listed as endangered and is also a California Fully Protected species. California condors require vast expanses of open savannah, grasslands, and foothill chaparral, with cliffs, large trees, and snags for roosting and nesting (Zeiner *et al.* 1990A). Until April 2008, California condors had not been known to nest or land within the Project area in the last 25 years (Bloom Biological 2007A, 2008).¹⁸ In April 2008, a California condor was observed feeding on a dead calf in a Potrero side canyon by wildlife biologist Chris Niemela (pers. comm. M. Carpenter, Newhall Ranch 2008). A condor was also observed in January 2009 in the Potrero Canyon area (Niemela 2009), and there have been other documented landings in the project area between April and July 2008 (Root 2008). Additional 2009 flight data provided to CDFG by the USFWS indicate that the condor frequently flies over the project area when moving between the Sespe Wilderness area to the northwest and the San Gabriel Mountains in the Angeles National Forest to the southeast of the project area, and that the species appears to be increasing its use of the Santa Clarita Valley area. No other mention of California condor observations have been made during numerous other plant and wildlife surveys conducted over the past 30 years within various portions of the Project area. Observations of California condors within the Newhall Ranch Specific Plan area have been associated where cattle grazing currently occurs and dead calves have provided feeding opportunities. Therefore, because grazing does not occur within the proposed Project site, there is a lack of carcasses. However, with increasing use of the Santa Clarita Valley area, the condor is expected to continue to forage opportunistically in portions of the Specific Plan, VCC, and Entrada planning areas for dead cattle and other large mammal carcasses. Implementation of the proposed project would not directly impact this species. However, impacts to this species were not addressed by the Newhall Ranch Specific Plan Program EIR due to more recent identification of the species in later surveys. the proposed project may cause significant impacts to California condor. To reduce this impact, the project applicant would

¹⁸ For this reason, impacts to the condor were not addressed in the Newhall Ranch Specific Plan Program EIR.

implement a series of mitigation measures designed to avoid or minimize such impacts to a level that is adverse but not significant. These include the following:

- Mitigation Measures SP-4.6 29 through SP-4.6-32 (recreational usage and access restrictions within the High Country SMA);
- Mitigation Measures LV 4.4-2 (conservation of 616.3 acres of coastal scrub), LV 4.4-57 (dedication of the Salt Creek area to the public), and LV 4.4-59 (restoration/enhancement of coastal scrub in the High County SMA, Salt Creek area, and River Corridor SMA);
- Mitigation Measure LV 4.4-65 (restrictions on installation of towers/poles in the High Country SMA and Salt Creek area); and
- Mitigation Measure LV 4.4-66 (installing anti-perching devices and debris control guidelines for towers/poles in the High Country SMA and Salt Creek area).

These measures would reduce the Project's potential impacts on condor individuals to less than significant levels.

Implementation of the proposed project would also result in the permanent loss of potential condor foraging areas, most of which consists of former cattle grazing lots. However, cattle have not grazed on site in many years and there is no evidence that condors have landed on the project site since 2002 when condor GPS data was first collected. The nearest landing site is Potrero Canyon, where condors have fed on cattle carcasses in the past. For this reason, there is not a quantifiable loss of foraging habitat on the project site. The California condor has not been documented to forage on site. As a result, the proposed project would not have a substantial adverse effect on its foraging behavior. Therefore, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species, and no significant impact would result.

Yellow-breasted chat (*Icteria virens*). The yellow-breasted chat is designated by CDFG as a California Species of Special Concern. This species is not federally listed as threatened or endangered, but has been listed as threatened, endangered, or of special concern in some states and provinces on the periphery of its range (e.g., Connecticut, New Jersey, New York, Ontario, and British Columbia) (Eckerle and Thompson 2001). In southern California, the yellow-breasted chat is primarily found in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories. This species has been observed on site nesting in riparian thickets in 2007 (Bloom Biological, Inc., 2007A) and has also been observed over multiple years during bird surveys conducted from 1988 through 2006 (Guthrie 1988–1990, 1991A, 1992, 1993A–B, 1994A–B, 1995A–B, 1996A–B, 1997A–B, 1998A–B, 1999A–B, 2000B–C, 2000E–F, 2001A–B, 2002A, 2002C, 2003A–B, 2004F, 2004H, 2005A–B, 2006A, 2006C; Labinger *et al.* 1995, 1997B; Labinger and Greaves 1999A). The proposed removal of riparian

vegetation and/or construction-related noise could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of bird nests on the site that may be disturbed or removed, the loss of active nests would be a significant impact. In order to avoid impacts to this species, the Project applicant would implement mitigation measures to reduce the impacts to yellow-breasted chat before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** (special-status species presence/absence survey requirements) and **SP 4.6-59** (consultation with the CDFG prior to surveys to establish appropriate survey methodology). This impact would also be reduced through the implementation of Mitigation Measures **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for active nests). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. Impacts to this species were not addressed by the Newhall Ranch Specific Plan Program EIR due to more recent identification of the species in later surveys.

Implementation of the proposed project would also result in the permanent loss of approximately 4.9 acres (14%) and temporary disturbance of approximately 31 acres (86%) of habitat for this species within the Landmark Village project site. Approximately 331 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. The yellow-breasted chat is still common in the project vicinity, and the project would affect a relatively small amount of habitat. Moreover, a substantial amount of habitat would be protected and managed. For these reasons, project impacts would have a less than significant impact on the species.

Loggerhead shrike (*Lanius ludovicianus*). The loggerhead shrike is a Bird of Conservation Concern and has been designated by CDFG as a California Species of Special Concern. The species occurs most frequently in riparian areas along the woodland edge, grasslands with sufficient perching and butchering sites, scrublands, and open-canopied woodlands, although they can be quite common in agricultural and grazing areas and can sometimes be found in mowed roadsides, cemeteries, and golf courses. The loggerhead shrike is a breeding resident on site (Bloom Biological, Inc., 2007A). It has been observed to be fairly common within California sagebrush scrub and grasslands in the Specific Plan area (Guthrie 1993B, 1996A, 2000A–B, 2002C, 2004A, 2004E, 2005B; Labinger *et al.* 1995; Lemons 2008; Bloom Biological, Inc., 2007A) and has been observed within the VCC planning area (Guthrie 1995A, 2004B); however, no mapped locations were recorded. Should this species occur on site, construction-related activities could result in the loss or abandonment of active nests. Depending on the number and extent of active nests on the site that may be disturbed or removed, the loss of active nests could be a significant impact. In order to avoid this impact to the loggerhead shrike, the Project applicant would implement mitigation measures to reduce the impacts to loggerhead shrike before and during construction. Applicable

mitigation measures include **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks), **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities), and **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for active nests). Implementation of these mitigation measures would result in the avoidance of impacts and, therefore, a significant impact would not occur. The finding that impacts to loggerhead shrike can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Implementation of the proposed project would also result in the permanent loss of approximately 614 acres (81%) and temporary disturbance of approximately 140 acres (19%) of habitat for this species within the Landmark Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 6,115 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

Black-crowned night-heron (*Nycticorax nycticorax*). The black-crowned night heron is designated by CDFG as a California Special Animal. This species is not federally listed as threatened or endangered within any part of its range. Its habitat requirements are varied, including all types of wetland areas, including fresh, brackish, and saltwater ecosystems and even man-made ditches, canals, reservoirs, and wet agricultural fields (IHRMP 2001G). On site, this species was observed early in the year and is thought to be a wintering or migratory species within the Project site and VCC planning area (Guthrie 1988, 1992, 1994A, 1995A, 1996A, 1997A, 1998B, 1999A, 2000E). In the most recent survey, several adults and juveniles were observed along the Santa Clara River after dusk and before dawn (Bloom Biological, Inc., 2007A). Observations of the species were mapped along the Santa Clara River in the NRSP Project area south of Landmark Village and near the Ventura County line (Bloom Biological, Inc., 2007A). No roosts or rookeries (nesting colonies) have been detected during the surveys within or adjacent to the Project site during any of the surveys that have been conducted over the years. Should nesting occur adjacent to the site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of nests on the site that may be disturbed or removed, the loss of active nests could be a significant impact. In order to avoid this impact to the black-crowned night-heron, the Project applicant would implement mitigation measures to reduce impacts to the black-crowned night-heron before and during construction. Applicable mitigation measures include **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks), **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities), and **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for active nests). Implementation of these mitigation measures would result in the avoidance of impacts and,

therefore, a significant impact would not occur. The finding that impacts to this species can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Implementation of the proposed project would also result in the permanent loss of approximately 12 acres (25%) and temporary disturbance of approximately 36 acres (75%) of habitat for this species within the Landmark Village project site. Approximately 381 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. The black-crowned night-heron is only a winter visitor or migrant in the project vicinity (no roosts or rookeries have been observed), a relatively small amount of habitat would be impacted. Further, a substantial amount of habitat would be protected and managed. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

Nuttall's woodpecker (*Picoides nuttallii*). The Nuttall's woodpecker is designated by CDFG as a California Special Animal. This species is not federally listed as threatened or endangered within any part of its range. The woodpecker is primarily found in oak woodlands, to a lesser extent in riparian woodlands, and rarely in conifer forests. Nuttall's woodpecker has been described as a species characteristic of, if not confined to, oak woodlands in California (Lowther 2000). It has been observed nearly every year along the Santa Clara River since surveys began in 1988. Nuttall's woodpeckers are common residents in cottonwood and willow riparian habitat along Santa Clara River, Castaic Creek and other tributaries, and in coast live oak woodlands in adjoining canyons. Bloom Biological recorded three to 14 daily within the RMDP Project area in 2007 (Bloom Biological, Inc., 2007A). Bloom Biological recorded additional sightings along the Santa Clara River east of Castaic Creek in the VCC planning area (Bloom Biological, Inc., 2007). Should nesting occur within or adjacent to the project site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of nests on the site that may be disturbed or removed, the loss of active nests could be a significant impact. In order to avoid this impact to the Nuttall's woodpecker, the Project applicant would implement mitigation measures to reduce impacts to the Nuttall's woodpecker before and during construction. Applicable mitigation measures include **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks), **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities), and **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for active nests). Implementation of these mitigation measures would result in the avoidance of impacts and, therefore, a significant impact would not occur.

Implementation of the proposed project would also result in the permanent loss of approximately 15 acres (29%) and temporary disturbance of approximately 36 acres (71%) of habitat for this species within

the Landmark Village project site. Approximately 1,640 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Nuttall's woodpecker is still common and abundant in the project vicinity, and the project would affect a relatively small amount of woodpecker habitat. In addition, a substantial amount of habitat would be protected and managed. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Summer tanager (*Piranga rubra*). The summer tanager is not state or federally endangered, but is designated by CDFG as a California Species of Special Concern. Western populations of summer tanagers occupy riparian woodlands dominated by willows and cottonwoods (*Populus* spp.) at lower elevations (Robinson 1996; Rosenberg *et al.* 1982, 1991); and at higher elevations they utilize mesquite (*Prosopis* spp.) and salt cedar (*Tamarix* spp.) habitats (Robinson 1996). No individuals have been observed within the Project site during annual bird surveys. One individual was observed off site west of the Ventura County line in 1993 and 1994 (Guthrie 1993B, 1994B); within Castaic Junction in 1991 (Guthrie 1991A); in April, May, and July 1993 in dense cottonwoods downstream of the Valencia Wastewater Plant (Castaic Junction area) (Guthrie 1993A); and it has also been observed east of the project site in 2000 and 2003 (Guthrie 2000E, 2003A). These observations were not mapped. ~~If This species occurs only rarely in coastal southern California as a breeding bird, and it is not expected to nest on site. However, if~~ nesting occurs on site, construction-related activities could result in the loss or abandonment of active nests. Depending on the number and extent of this species' active nests on site that may be disturbed or removed, the loss of active nests would be a potentially significant impact. The Project applicant would implement mitigation measures to reduce or avoid impacts to summer tanager before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). This impact would also be reduced through the implementation of Mitigation Measures **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for active nests). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. The finding that impacts to summer tanager can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Implementation of the proposed project would also result in the permanent loss of approximately 4.9 acres (14%) and temporary disturbance of approximately 31 acres (86%) of habitat for this species within the Landmark Village project site. Approximately 331 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. The summer tanager is uncommon and not expected to nest on site; and the project would affect a relatively small amount of habitat. Further, a substantial amount of habitat would be protected and managed. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

Coastal California gnatcatcher (*Polioptila californica californica*). The coastal California gnatcatcher is a federally listed threatened species and a CDFG Species of Special Concern. It occurs in coastal southern California and Baja California year-round, where it depends on a variety of arid scrub habitats. While isolated occurrences of California gnatcatchers occur off site to the east and southwest, no California gnatcatchers have been observed during the course of the focused surveys conducted for this species within the Specific Plan or Entrada areas. However, during the course of surveys conducted within the VCC planning area, an individual California gnatcatcher was observed on October 5, 2007, by Dudek biologist Jeff Priest and biologist Ron Francis, a subconsultant to Dave Crawford, Compliance Biology, Inc. (Priest 2007A). Should this species occur on the site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of this species' bird nests that may be disturbed or removed, the loss of active nests would be a potentially significant impact. The Project applicant would implement mitigation measures to reduce or avoid impacts to California gnatcatcher before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). This impact would also be reduced through the implementation of Mitigation Measures **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities), ~~and~~ **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for active nests), ~~and~~ **LV 4.4-61** (replace or enhance nesting and foraging habitat for least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, and coastal California gnatcatcher). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 156 acres (85%) and temporary disturbance of approximately 27 acres (15%) of habitat for this species within the Landmark Village project site. Absent mitigation, these impacts to a federally-listed bird species would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 1,986 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Vermilion flycatcher (*Pyrocephalus rubinus*). The vermilion flycatcher is designated by CDFG as a California Species of Special Concern. This species is found in riparian thickets near open, mesic habitats. It breeds in cottonwood, willow, mesquite, oak, sycamore, and other vegetation in desert riparian communities that are located adjacent to irrigated fields, irrigated ditches, or pastures (Zeiner *et al.* 1990A; Wolf and Jones 2000). A single individual was observed along the Santa Clara River on June 19, 1993 (Guthrie 1993B). This is the only observation of a vermilion flycatcher from any of the many years of surveys both within and adjacent to the Project site, and its location was not mapped. Should this species occur on the site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of this species' bird nests that may be disturbed or removed, the loss of active nests would be a potentially significant impact. The Project applicant would implement mitigation measures to reduce or avoid impacts to vermilion flycatcher before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). This impact would also be reduced through the implementation of Mitigation Measures **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for active nests). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 4.9 acres (14%) and temporary disturbance of approximately 31 acres (86%) of habitat for this species within the Landmark Village project site. Approximately 336 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. The vermilion flycatcher is very uncommon and not expected to nest on site; and the project would affect a relatively small amount of habitat. Further, a substantial amount of habitat would be protected and managed. For these reasons,

this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Allen's/Rufous hummingbird (*Selasphorus rufus/sasin*). The Allen's and rufous hummingbirds ~~is~~ are designated by CDFG as ~~a~~ California Special Animals. These species are treated together because observations of migrants in the project vicinity could have been either species; their status in California is uncertain because the two species may be confused. ~~These~~ is species ~~are~~ is not federally listed as threatened or endangered within any part of its range and according to Sauer *et al.* (1996) showed no statistically significant declines in populations for the period from 1966 to 1996. The rufous hummingbird's breeding ~~its breeding range~~ in California is limited to the norther portion of the state. Allen's hummingbird migrates through the project vicinity, but may also nest on site. The Vegetation communities most commonly used by breeding Allen's hummingbirds are coastal scrub, valley foothill hardwood, and valley foothill riparian habitats. Allen's and/or rufous hummingbirds has been documented numerous times within the NRSP Project area; most these individuals are assumed to have been migrants. Five individuals were observed in March and April 2004 in the southern and western portions of Legacy Village, which includes Long, Potrero, and Pico canyons (Guthrie 2004G). No mapped occurrences of this species were recorded. However, a few observations of individuals in the VCC planning area have been made in June or July and could have been resident Allen's hummingbird. .

~~The p~~Project vicinity is outside the species' rufous hummingbird's breeding range, so no impacts to active nests would occur. ~~Injury or mortality of adult rufous hummingbirds related to construction activities is not expected because this species is highly mobile. Individuals of the species would not be affected by the Project. Impacts to this species during construction would be less than significant. Should Allen's hummingbird nest on the site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of this species' bird nests that may be disturbed or removed, the loss of active nests would be a potentially significant impact. The Project applicant would implement mitigation measures to reduce or avoid impacts to Allen's hummingbird before and during construction. Applicable mitigation measures include previously incorporated measures SP 4.6-53 and SP 4.6-59 (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). This impact would also be reduced through the implementation of Mitigation Measures LV 4.4-18 (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and LV 4.4-21 (pre-construction surveys for nesting native bird species and construction setbacks for~~

active nests). Implementation of these mitigation measures would reduce this impact to Allen's hummingbird to a level that is adverse but not significant.

The project vicinity is outside the rufous hummingbird's breeding range, so no impacts to active nests would occur. Injury or mortality of adult rufous hummingbirds related to construction activities is not expected because this species is highly mobile. Individuals of the species would not be affected by the Project. Impacts to this species during construction would be less than significant.

Implementation of the proposed project would result in the permanent loss of approximately 167 acres (71%) and temporary disturbance of approximately 68 acres (29%) of habitat for Allen's hummingbird within the Landmark Village project site. Approximately approximately 5,367 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Allen's hummingbirds are uncommon in the project vicinity during the nesting season and the potential for impacts to nesting birds is low. Further, a substantial amount of habitat would be protected and managed. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

Implementation of the proposed project would also result in the permanent loss of approximately 162 acres (65%) and temporary disturbance of approximately 88 acres (35%) of habitat for the rufous hummingbird within the Landmark Village project site. Approximately approximately 5,367 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Survey data indicate that the rufous hummingbirds observed on site were migrants, not resident birds. Given that the rufous hummingbird does not use the site extensively and does not nest there, and given that the project would affect a relatively small amount of hummingbird habitat, the project would not have a significant impact on this species.

~~If nesting occurs on site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of this species' bird nests on the site that may be disturbed or removed, the loss of active nests could be a significant impact. In order to avoid impacts to these species, the project applicant would implement mitigation measures to reduce impacts to the rufous/Allen's hummingbird before and during construction. Applicable mitigation measures include SP 4.6-53 and SP 4.6-59 (updated surveys for special status species and consultation with the County and CDFG at important benchmarks), MV 4.3-15 (pre construction surveys for nesting native bird species and construction setbacks for active nests) and MV 4.3-26 (pre construction educational meetings, construction limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce impacts to rufous hummingbirds to a level that is adverse but not significant. If nesting were to occur within or adjacent to the project site, construction related activities could result in the loss or abandonment of active nests~~

during that year's nesting season. Depending on the number and extent of nests on the site that may be disturbed or removed, the loss of active nests could be a significant impact. In order to avoid impacts to these species, the Project applicant would implement mitigation measures to reduce impacts to the rufous/Allen's hummingbird before and during construction. Applicable mitigation measures include ~~SP 4.6-53 and SP 4.6-59 (updated surveys for special status species and consultation with the County and CDFG at important benchmarks), LV 4.4-18 (pre construction educational meetings, construction limit staking, and biological monitoring during vegetation clearing and grading activities), and LV 4.4-21 (pre-construction surveys for nesting native bird species and construction setbacks for active nests).~~ Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Chipping sparrow (*Spizella passerine*). The chipping sparrow is designated by CDFG as a California Special Animal. This species is not federally listed as threatened or endangered within any part of its range and Sauer *et al.* (1997) have concluded that continental populations appear healthy. Chipping sparrows prefer open wooded habitats with a sparse or low herbaceous layer and few shrubs, if any (Zeiner *et al.* 1990A). On site, this species has been observed as a common migrant in the NRSP area, and one to 12 individuals were observed near edges of agricultural fields most days in early March (Bloom Biological, Inc., 2007A). The chipping sparrow has been observed over multiple years during bird surveys conducted from 1988 through 2007 along the Santa Clara River within riparian scrub and woodland habitat; however, there are no mapped occurrences of these observations. If nesting were to occur, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of nests on the site that may be disturbed or removed, the loss of active nests could be a significant impact. In order to avoid impacts to this species, the Project applicant would implement mitigation measures to reduce the impacts to chipping sparrow before and during construction. Applicable mitigation measures include **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks), **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities), and **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for active nests). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 3.3 acres (45%) and temporary disturbance of approximately 4 acres (55%) of habitat for this species within the Landmark Village project site. Approximately 1,281 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Migrant chipping sparrows have been commonly observed in the project vicinity; and the project would affect a relatively small amount of

habitat. Further, a substantial amount of habitat would be protected and managed. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Least Bell's vireo (*Vireo bellii pusillus*). The least Bell's vireo was state listed as endangered in 1980 and federally listed as endangered by the USFWS in 1986 (51 FR 16474). The USFWS made a final critical habitat designation for the least Bell's vireo in 1994 (59 FR 4845). The Landmark Village project site supports 649 acres of vireo critical habitat. However, of this designated critical habitat, 58 acres support primary constituent elements, including nesting and foraging habitat and foraging only habitat within 100 feet of nesting habitat. The remaining 591 acres are uplands, including substantial acreages of disturbed and agricultural lands, and are not suitable habitat for the species. Least Bell's vireos primarily occupy riverine riparian habitats that typically feature dense cover within 1 to 2 meters of the ground and a dense, stratified canopy. The least Bell's vireo inhabits low, dense riparian growth along water or along dry parts of intermittent streams and is typically associated with southern willow scrub, cottonwood forest, mulefat scrub, sycamore alluvial woodland, southern coast live oak riparian forest, arroyo willow riparian forest, wild blackberry, or mesquite in desert localities. The least Bell's vireo has been observed almost every year along the Santa Clara River within the Specific Plan area (Guthrie 1993B, 1995B, 1996B, 1997B, 1998A, 1999B, 2000C, 2001B, 2002C, 2003B, 2004H, 2005B, 2006A; Labinger *et al.* 1995, 1996, 1997A-B; Labinger and Greaves 1999A; Bloom Biological, Inc., 2007A), and off site in Castaic Junction (Guthrie 1988, 1990, 1991A, 1996A, 1997A, 1998B, 2000E, 2001A, 2002A, 2003A, 2004F, 2004I, 2005A, 2006C; Dudek 2006E; Bloom Biological, Inc. 2007A) and has also been observed over multiple years within the VCC planning area (Guthrie 1994A, 1995A, 1996A, 2003A, 2006C). Most recently, Bloom Biological observed at least 56 territories and three active nests within the Specific Plan area and adjacent areas (Bloom Biological, Inc., 2007A). If least Bell's vireos are nesting during development of the site, the proposed removal of riparian vegetation and/or construction-related noise could result in the loss or abandonment of active nests during that year's nesting season. In light of the vireo's status as a federal- and state-listed endangered species, loss of active nests would be a significant impact. In order to avoid this impact to the least Bell's vireo, the Project applicant would implement mitigation measures to reduce impacts to the least Bell's vireo before and during construction. Applicable mitigation measures include **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks), **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities), ~~and~~ **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for active nests), and

LV 4.4-61 (replace or enhance nesting and foraging habitat for least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, and coastal California gnatcatcher). Implementation of these mitigation measures would avoid impacts on the least Bell's vireo. As a result, no significant impact would occur. The finding that impacts to least Bell's vireo can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Implementation of the proposed project would result in the permanent loss of approximately 58 acres (31%) of suitable habitat for least Bell's vireo within the Landmark Village project site, including 17 acres of nesting and foraging habitat and 1.2 acres of foraging only habitat. The proposed project also would result in the temporary disturbance of approximately 40 acres (69%) of suitable habitat, including 39 acres of nesting and foraging habitat and 1.0 acre of foraging only habitat. All permanent and temporary impacts would occur within designated critical habitat. However, approximately 359 acres of suitable nesting and foraging habitat for least Bell's vireo would be protected and managed in the River Corridor SMA, of which 113 acres are within critical habitat. The least Bell's vireo is state and federally listed as endangered, and has experienced large losses of riparian habitat in Southern California. The project's impacts to designated critical habitat, as well as its impacts to suitable habitat, could have a substantial adverse effect on least Bell's vireo habitat use, thus substantially reducing its range on site. This impact would be significant, absent mitigation. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to less than significant.

Yellow-headed blackbird (*Xanthocephalus xanthocephalus*). The yellow-headed blackbird is designated by CDFG as a California Species of Special Concern. This species is not federally listed as threatened or endangered within any part of its range. It is found primarily within prairie wetlands, but it is also found commonly in wetlands associated with quaking aspen parks, mountain meadows, and arid regions. This species has been observed within the Specific Plan area (Guthrie 1996B, 1997B, 1999B, 2001B; Bloom Biological, Inc., 2007A) and within the VCC planning area (Guthrie 1997A, 2006C). Bloom Biological observed one individual in an agriculture field within a flock of red-winged blackbirds on April 1, 2007 (Bloom Biological, Inc., 2007A). No nesting colonies have been observed within the Project site. If nesting were to occur within or adjacent to the project site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of nests on the site that may be disturbed or removed, the loss of active nests could be a significant impact. In order to avoid impacts to these species, the Project applicant would implement mitigation measures to reduce impacts to the yellow-headed blackbird before and during construction. Applicable mitigation measures include **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks), **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities), and **LV 4.4-21** (pre-construction surveys for nesting native bird species and

construction setbacks for active nests). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 483 acres (65%) of upland foraging habitat and temporary disturbance of approximately 266 acres (35%) of upland foraging habitat for this species within the Landmark Village project site. Approximately 1,434 acres of habitat (including 1.4 acres of suitable nesting habitat) would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Although all of the on-site upland foraging habitat would be impacted, this species occurs only rarely in the project vicinity and is not expected to nest on site. In addition, a large amount of suitable upland foraging habitat would be protected and managed. For these reasons, the project impacts to upland foraging habitat would not have a substantial adverse effect on the use of the project vicinity. Therefore, no significant impact would result.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Pallid bat (*Antrozous pallidus*), California Species of Special Concern; **western mastiff bat** (*Eumops perotis*), California Species of Special Concern; **western red bat** (*Lasiurus blossewillii*), California Species of Special Concern; **pocketed free-tailed bat** (*Nyctinomops femorosaccus*), California Species of Special Concern; fringed myotis (*Myotis thysanodes*), California Species of Special Concern; and **Yuma myotis** (*Myotis yumanensis*), California Special Animal. These species were observed and/or detected in the vicinity of the project site during active AnaBat surveys conducted in 2004 and 2006. Suitable western mastiff bat and pocketed free-tailed bat roosting habitat does not occur on or adjacent to the project site; however, the SR-126 bridge and oak woodlands provide suitable roosting habitat for the pallid bat. Suitable western red bat roosting habitat and fringed myotis habitat occurs throughout the project site. Forests and woodlands are primary habitats for the Yuma myotis. Should active bat roosts be present, construction-related activity could result in the direct loss or abandonment of active roost sites. In order to reduce these impacts, the Project applicant would avoid direct effects on pallid bat individuals during construction and establish new day roosts should any existing day roosts be permanently lost as a result of the project. The applicable mitigation measure for impacts during construction is **LV 4.4-25** (pre-construction surveys for active roosts of special-status bats), which requires that, no earlier than 30 days prior to the commencement of construction activities, a pre-construction survey be conducted by a qualified biologist to determine whether active roosts of special-status bats, including the pallid bat, are present on or within 300 feet of the Project disturbance boundaries. Should an active maternity roost be identified (the breeding season of native bat species in California, including the pallid bat, generally occurs from April 1 through August 31), the roost shall not be disturbed and construction within 300 feet shall be postponed or halted, at the discretion of the biological monitor, until the roost is vacated and

juveniles have fledged, as determined by the biologist. The applicable mitigation measure for permanent loss of a day roost is LV 4.4-26 (day roost site replacement), which requires the Project applicant to prepare and implement a bat roost site creation plan that would establish (an) alternative roost site(s) within suitable preserved open space located at an adequate distance from sources of human disturbance. Implementation of these mitigation measures would reduce this impact to a level that is not significant. The finding that impacts to special-status bats can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Program EIR.

For the pocketed free-tailed bat, western mastiff bat, and western red bat, implementation of the proposed project would result in the permanent loss of approximately 268 acres (72%) and temporary disturbance of approximately 107 acres (29%) of foraging habitat. Approximately 6,265 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

For the pallid bat, implementation of the proposed project would result in the permanent loss of approximately 265 acres (74%) and temporary disturbance of approximately 91 acres (26%) of habitat. Approximately 5,833 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

For the Yuma myotis, implementation of the proposed project would result in the permanent loss of approximately 12 acres (23%) and temporary disturbance of approximately 40 acres (77%) of habitat. Approximately 573 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. The project would affect a large of foraging habitat for all of the identified bat species, except Yuma myotis. This impact to foraging habitat could have a substantial adverse effect on the foraging patterns on these bats on site. Absent mitigation, the impact would be significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to less than significant.

For Yuma myotis, which is a widespread species in the non-desert regions of California (except along the lower Colorado River), a small amount of foraging habitat would be impacted and a substantial amount of habitat would be protected and managed. The combined permanent loss and temporary disturbance of habitat for Yuma myotis would be less than significant.

San Diego black-tailed jackrabbit (*Lepus californicus bennettii*). The San Diego black-tailed jackrabbit is listed as a California Species of Special Concern. The black-tailed jackrabbit occupies many diverse habitats, but is primarily found in arid regions supporting shortgrass habitats. Systematic surveys of the Project area have not been conducted, but the San Diego black-tailed jackrabbit has been anecdotally observed on site (Impact Sciences, Inc., 2005). Based on the Impact Sciences (2005) report of the San Diego black-tailed jackrabbit in the Project area, it is assumed that the species potentially occurs in suitable

habitat throughout the site. Construction-related activities could result in the impacts to individual black-tailed jackrabbit. In order to reduce impacts to this species, the Project applicant would implement four mitigation measures designed to avoid impacts and otherwise capture and relocate animals away from the work area prior to construction. These animals would be handled by qualified biologists and placed in a pre-approved area capable of supporting the species. In addition, the Project applicant would conduct biological monitoring during ground-disturbing activities, in an effort to salvage animals that may be discovered during construction activities. These measures will reduce impacts to San Diego black tailed jackrabbit individuals to the extent feasible and practicable. Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). Additional applicable mitigation measures are **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities), **LV 4.4-23** (pre-construction surveys and relocation of San Diego black-tailed jackrabbit and San Diego desert woodrat), and **LV 4.4-28** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 558 acres (81%) and temporary disturbance of approximately 135 acres (19%) of habitat for this species within the Landmark Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 3,551 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The Newhall Ranch Specific Plan Program EIR concluded that the substantial loss of habitat, and potential impacts to individuals of this species, would be considered a significant unavoidable impact; however, the mitigation proposed in the Specific Plan EIR was not as extensive as this Recirculated Landmark Village EIR. See **Subsection 9.b.(1)(b), Wildlife Habitat Loss**, for a discussion of project-related impacts to special-status wildlife due to habitat loss. In addition to the mitigation measures described above, a total of 6,113,551 acres of potential suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Additional mitigation to that in the Newhall Ranch Specific Plan Program EIR includes **LV 4.4-2** (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Landmark Village); **LV 4.4-6** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and **LV 4.4-28** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not

significant. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

San Diego desert woodrat (*Neotoma lepida intermedia*). The San Diego desert woodrat is listed as a California Species of Special Concern. Desert woodrats are found in a variety of shrub and desert habitats and are primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth (Bleich 1973; Bleich and Schwartz 1975; Brown *et al.* 1972; Cameron and Rainey 1972; Thompson 1982). The mammal assessment conducted by Impact Sciences (2005) found that the San Diego desert woodrat is a relatively common rodent within the Specific Plan area of the NRSP site. Dudek observed a single midden in the High Country SMA (Dudek 2006B). San Diego desert woodrat was observed in Long and Potrero Canyons in 2005 (Chris Huntley, personal communication, October 2006). Construction-related activities would result in the direct impacts to individual woodrats or active woodrat nests (stick houses). Implementation of proposed Mitigation Measures **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities), **LV 4.4-23** (pre-construction surveys and relocation of San Diego black-tailed jackrabbit and San Diego desert woodrat), and **LV 4.4-28** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation) would reduce the magnitude of impacts to the San Diego desert woodrat to less than significant.

Implementation of the proposed project would also result in the permanent loss of approximately 206 acres (84%) and temporary disturbance of approximately 38 acres (16%) of habitat for this species within the Landmark Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 3,487 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The Newhall Ranch Specific Plan Program EIR concludes that due to the substantial loss of habitat resulting from buildout of the Specific Plan, impacts to San Diego desert woodrat would be considered a significant unavoidable impact; however, the mitigation proposed in the Specific Plan EIR was not as extensive as this Recirculated Landmark Village EIR. See **Subsection 9.b.(1)(b), Wildlife Habitat Loss**, for a discussion of project-related impacts to special-status wildlife due to habitat loss. In addition to the mitigation measures described above, a total of 6,113,487 acres of potential suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Additional mitigation to that in the Newhall Ranch Specific Plan Program EIR includes **LV 4.4-2** (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Landmark Village);

LV 4.4-6 (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and LV 4.4-28 (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Mule deer (*Odocoileus hemionus*). The mule deer is considered a CDFG trust resource and is considered a special-status species for the purposes of this analysis, because take of the species requires a game permit. Mule deer have been documented within and adjacent to the Project area during focused surveys in 2004 for mammals by Impact Sciences (2005). Mule deer were also observed in the High Country SMA/SEA 20 in 2005 (Dudek and Associates, Inc. 2006B). Construction-related activities could result in impacts to individual mule deer. Potentially significant impacts to mule deer could occur without mitigation, depending on the number and extent of the species on site that may be disturbed or removed. ~~In order to reduce impacts to this species, the Project applicant would implement several mitigation measures designed to avoid impacts during the rearing season (i.e., the period from birth to dispersal of young) and otherwise capture and relocate animals away from the work area prior to construction. These animals would be handled by qualified biologists and placed in a pre approved area capable of supporting the species. In addition, the Project applicant would conduct biological monitoring during ground disturbing activities, in an effort to salvage animals that may be discovered during construction activities. These measures will reduce impacts to badger individuals to the extent feasible and practicable.~~ Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). Additional applicable mitigation measures are **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities), and **LV 4.4-28** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. ~~The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis. The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.~~

Implementation of the proposed project would also result in the permanent loss of approximately 221 acres (75%) and temporary disturbance of approximately 75 acres (25%) of habitat for this species within the Landmark Village project site. Approximately 5,140 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Although a large amount habitat would be impacted, the mule deer is a common and widespread species in California and a large

amount of habitat for the species would be protected and managed. It is expected to remain a common species in the project vicinity in the River Corridor SMA, High Country SMA, and Salt Creek area. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

Note that the Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Mountain lion (*Odocoileus hemionusconcolor*). The mountain lion is designated by CDFG as a Specially Protected Mammal, which affords it some protections: it is unlawful to take, injure, possess, transport, import, or sell any species that are considered Specially Protected Mammals (except with a depredation permit for mountain lion). The mountain lion is considered a special-status species for the purposes of this analysis. Mountain lions prefer habitats that provide cover, such as thickets of brush and timber in woodland vegetation communities (Zeiner *et al.* 1990B). They also utilize caves and other natural cavities for cover and breeding. Mountain lions have been documented within and adjacent to the Project area during focused surveys in 2004 for mammals by Impact Sciences (2005). Specific locations for mountain lions in the Project area were not provided, but it is assumed that mountain lions could occur anywhere in the Project area where deer also occur. Construction-related activities could result in impacts to individual mountain lion. Potentially significant impacts to mountain lion could occur without mitigation, depending on the number and extent of the species on site that may be disturbed or removed. ~~In order to reduce impacts to this species, the Project applicant would implement several mitigation measures designed to avoid impacts during the rearing season (i.e., the period from birth to dispersal of young) and otherwise capture and relocate animals away from the work area prior to construction. These animals would be handled by qualified biologists and placed in a pre-approved area capable of supporting the species. In addition,~~ ~~†~~The Project applicant would conduct biological monitoring during ground disturbing activities, in an effort to salvage animals that may be discovered during construction activities. These measures will reduce impacts to badger individuals to the extent feasible and practicable. Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). Additional applicable mitigation measures are **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities), and **LV 4.4-28** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 221 acres (75%) and temporary disturbance of approximately 75 acres (25%) of habitat for this species within the Landmark Village project site. Approximately 5,140 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. This species is uncommon in the project vicinity, and its range in California is being reduced by urbanization. The project would contribute to this trend by affecting a large portion of mountain lion habitat on site. For this reason, the project would have a significant impact on this species, absent mitigation. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

American badger (*Taxidea taxus*). The American badger is listed as a California Species of Special Concern (CSC). Badgers are generally associated with dry, open, treeless regions, prairies and grasslands, low-intensity agriculture (e.g., pasture and dryland crops), drier open shrublands and forest, parklands, and cold desert areas (Long 1973; Zeiner *et al.* 1990B). The badger, although not common on site, has been documented through systematic surveys and anecdotal observations of badger dens and tracks in three locations in the Project area, including the Specific Plan area (Impact Sciences, Inc., 2005), Potrero Creek in the Specific Plan area (Behrends, personal observation, 2006), and High Country SMA/SEA 20 (Dudek 2006B). Construction-related activities could result in impacts to individual American badger. Potentially significant impacts to American badgers could occur without mitigation, depending on the number and extent of the species on site that may be disturbed or removed. In order to reduce impacts to this species, the Project applicant would implement several mitigation measures designed to avoid impacts during the rearing season (i.e., the period from birth to dispersal of young) and otherwise capture and relocate animals away from the work area prior to construction. These animals would be handled by qualified biologists and placed in a pre-approved area capable of supporting the species. In addition, the Project applicant would conduct biological monitoring during ground disturbing activities, in an effort to salvage animals that may be discovered during construction activities. These measures will reduce impacts to badger individuals to the extent feasible and practicable. Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). Additional applicable mitigation measures are **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities), **LV 4.4-28** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation), and **LV 4.4-24** (American badger natal den avoidance). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. The Newhall Ranch Specific Plan Program

EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Implementation of the proposed project would also result in the permanent loss of approximately 558 acres (81%) and temporary disturbance of approximately 135 acres (19%) of habitat for this species within the Landmark Village project site. Approximately 3,551 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. This species is uncommon in the project vicinity, and its range in California is being reduced by urbanization. The project would contribute to this trend by affecting a large portion of badger habitat on site. For this reason, the project would have a significant impact on this species, absent mitigation. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to less than significant.

Black bear (*Ursus americanus*). The American black bear is considered special status as a trust resource by CDFG for the purposes of this report. The black bear is found in dense, mature stands of a variety of forest types. It can utilize valley foothill riparian forests, wet meadows, and brushy stands of forests. The black bear was anecdotally observed within High Country SMA/SEA 20 in 2005 (Dudek 2006B). The specific location was not recorded, but it is assumed that black bears utilize portions of the High Country SMA/SEA 20 due to its connection to the Santa Susana Mountains to the south. ~~Construction~~This species may occasionally use a portion of the Santa Clara River within the Specific Plan area for movement between the Santa Susana Mountains and Santa Monica Mountains to the south and the Los Padres National Forest and Angeles National Forest in the Sierra Madre Mountains to the north. Because the proposed project site is not regularly used, on site suitable habitat for the black bear was not quantified. Nonetheless, construction-related activities could result in impacts to individual black bear. Potentially significant impacts to black bear could occur without mitigation, depending on the number and extent of the species on site that may be disturbed or removed. In order to reduce impacts to this species, the Project applicant would implement several mitigation measures designed to avoid impacts during the rearing season (i.e., the period from birth to dispersal of young) and otherwise capture and relocate animals away from the work area prior to construction. These animals would be handled by qualified biologists and placed in a pre-approved area capable of supporting the species. In addition, the Project applicant would conduct biological monitoring during ground disturbing activities, in an effort to salvage animals that may be discovered during construction activities. These measures will reduce impacts to badger individuals to the extent feasible and practicable. Applicable mitigation measures include the previously incorporated measures SP 4.6-53 and SP 4.6-59 (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). Additional applicable mitigation measures are LV 4.4-18 (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities), and LV 4.4-28 (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation).

Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Impacts to Species Potentially Occurring on the Landmark Village Site

Trask shoulderband snail (*Helminthoglypta traskii traskii*). The Trask shoulderband snail is listed as a California Special Animal. Surveys of the project site~~area~~ and surrounding areas in the Specific Plan ~~area~~ for Trask shoulderband snail between November 2009 and January 2010 (Huntley 2010) were negative. However, three non-special-status shoulderband snail species were detected ~~o~~~~n~~ the project site~~area~~ or surrounding areas. These included specimens tentatively identified as Southern California shoulderband snail, Vasquez rocks shoulderband snail, and Grapevine shoulderband snail. Based on these survey results, the presence of coastal scrub, riparian and chaparral vegetation communities, and the occurrence of the Trask shoulderband snail downstream along the Santa Clara River in the Fillmore area, it was concluded that the Trask shoulderband snail potentially occurs in the project area.

If present, the Trask shoulderband snail subspecies likely would be limited to small microhabitats, such as decaying yucca clumps, downed wood, stick litter around the bases of trees and shrubs, and woodrat nests that occur in coastal scrub, riparian, and chaparral vegetation communities. Because Trask shoulderband snails in general are associated with specific microhabitats, their total suitable habitat on site was not quantified.

Potential direct impacts (loss of individual snails and/or microhabitats) and indirect impacts (construction-related dust and ground vibration; habitat fragmentation; off-road vehicles; cattle grazing; altered wildfire regimes; invasive plant species; increased human activity; Argentine ants; other introduced non-native snails such as decollate snails; increased activity by pet, stray, and feral cats and dogs; and pesticides) to Trask shoulderband snail, if it occurs, as a result of implementation of the proposed project would, (1) constitute a substantial direct adverse effect on this species, (2) conflict with local policies and ordinances protecting biological resources, and (3) substantially reduce the number and range of this species. Thus, this impact is significant, absent mitigation. In order to reduce direct impacts to this species, the project applicant would implement a series of mitigation measures designed to avoid or minimize the impact of project implementation on Trask shoulderband snail, if it occurs, to a level that is adverse but not significant. Applicable mitigation measures include the following previously incorporated measures:

- Mitigation Measures SP 4.6-1 through SP 4.6-16, SP 4.6-21 through SP 4.6-26, and SP 4.6-63 (habitat restoration, enhancement, and preservation of the River Corridor SMA/SEA 23);
- Mitigation Measure SP 4.6-17 (standards for trail design and limitations on human and pet access to the River Corridor SMA/SEA 23), SP 4.6-18 (provision of transition areas adjacent to the River Corridor SMA/SEA 23), SP 4.6-19 (requirements for transition areas adjacent to the River Corridor SMA/SEA 23);
- Mitigation Measures SP 4.6-20, SP 4.6-34, and SP 4.6-35 (guidelines for grading activities in the River Corridor SMA/SEA 23 and the High Country SMA/SEA 20);
- Mitigation Measure SP 4.6-27 (habitat enhancement of the High Country SMA/SEA 20);
- Mitigation Measures SP 4.6-29 through SP 4.6-32 (recreation and access restrictions within the High Country SMA/SEA 20);
- Mitigation Measure SP 4.6-33 (protection of transition areas between the development edge and the High Country SMA/SEA 20);
- Mitigation Measures SP 4.6-36 through SP 4.6-42 (open space dedication of the High Country SMA/SEA 20); and
- Mitigation Measures SP 4.6-53 and SP 4.6-59 (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks).

This impact would also be reduced through the implementation of the following:

- Mitigation Measure LV 4.4-15 (restriction of construction activities in the riverbed to specified areas)
- Mitigation Measure LV 4.4-1 (development of a conceptual wetlands mitigation plan);
- Mitigation Measure LV 4.4-2 (preservation of 155.7 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Landmark Village);
- Mitigation Measures LV 4.4-29 through MV 4.4-41 (wetlands mitigation plan and riparian restoration activities on the project site);
- Mitigation Measure LV 4.4-46 (develop an integrated pest management plan that addresses pesticide use);
- Mitigation Measure LV 4.4-48 (control of pet, stray, and feral cats and dogs in or near open space areas);
- Mitigation Measure LV 4.4-51 (quarterly monitoring and control measures for Argentine ants for up to 5 years);
- Mitigation Measure LV 4.4-43 (dust control measures to protect vegetation communities and special-status aquatic wildlife species);

- Mitigation Measure LV 4.4-49 (permanent fencing along trails in the River Corridor SMA/SEA 23);
- Mitigation Measure LV 4.4-44 (review of plant palettes and inspection of container plants for use within 200 feet of native vegetation for pests and disease; restrictions on invasive plants and irrigation).

Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. Impacts to this species were not previously analyzed as part of the Newhall Ranch Specific Plan Program EIR and Additional Analysis because the snail was identified as potentially occurring on the project area after that environmental documentation was certified.

Southern Steelhead (*Oncorhynchus mykiss*). The southern steelhead is listed as federally endangered and is listed as a California Species of Special Concern. Within the Santa Clara River drainage, southern steelhead historically inhabited Piru Creek, Sespe Creek, Santa Paula Creek, Hopper Creek, and possibly Pole Creek (Titus *et al.* n.d.). Presently, southern steelhead occur downstream of the proposed Project in the Santa Clara River watershed in Piru Creek, between the confluence with the Santa Clara River and Santa Felicia Dam, in Sespe Creek, in Santa Paula Creek, and possibly in Hopper Creek and Pole Creek (Stoeker and Kelly 2005). Habitat for juveniles and spawning adults is described as relatively cool freshwater streams, well-oxygenated water with adequate depth and cover in the way of gravel, cobble, boulder, undercut banks, large and small woody debris, and overhanging vegetation. As non-spawning adults, southern steelhead are found in the Pacific Ocean (McEwan and Jackson 1996; Moyle 2002). Reconnaissance surveys conducted along the Santa Clara River and tributary drainages within the

Additional applicable mitigation measures include:

- Mitigation Measure LV 4.4-10 (development of a Stream Crossing and Diversion Plan);
- Mitigation Measure LV 4.4-11 (regulating stream diversion bypass channels and dewatering);
- Mitigation Measure LV 4.4-12 (creation of habitat for special-status fish during construction);
- Mitigation Measure LV 4.4-13 (installation of structures within the riverbed not to impair movement of aquatic life);
- Mitigation Measure LV 4.4-14 (prevention of mud and pollutants from entering streams and storm flows);
- Mitigation Measure LV 4.4-15 (restriction of construction activities in the riverbed to specified areas);
- Mitigation Measure LV 4.4-18 (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities);
- Mitigation Measure LV 4.4-54 (patrol for stranded fish and aquatic organisms); and
- Mitigation Measure LV 4.4-55 (surveys of riverbed for California red-legged frog).

Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 7.4 acres (14%) and temporary disturbance of approximately 44 acres (86%) of habitat for this species within the Landmark Village project site. Approximately 575 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. The California red-legged frog is federally listed as threatened and has suffered large population declines. For these reasons, the project's impacts on red-legged frog habitat would be significant, absent mitigation. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant.

The Newhall Ranch Program EIR did not address potential impacts to California red-legged frog given the species limited potential to occur on the project site.

Rosy boa (*Charina trivirgata*). The rosy boa is designated by CDFG as a California Special Animal. The rosy boa inhabits rocky shrubland and desert habitats and is attracted to oases and streams but does not require permanent water (Stebbins 2003). Rosy boas were not trapped or otherwise observed during surveys conducted on portions of the Specific Plan area in 2004 and 2006 (Impact Sciences, Inc., 2006A). Suitable habitat occurs in association with scrub, chaparral, riverbank, and oak woodland habitats, and

rosy boa is presumed to occur in portions of the site supporting these habitat types. Construction-related activities could result in the direct impacts to individual animals. In order to reduce impacts to this species, the Project applicant would implement four mitigation measures designed to capture and relocate animals away from the work area prior to construction. The captured animals would be handled by qualified biologists and placed in a pre-approved area capable of supporting the species. In addition, the Project applicant would conduct biological monitoring during ground-disturbing activities in an effort to salvage animals that may be uncovered during construction activities. Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). Additional applicable mitigation measures are **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-20** (surveys to capture and relocate special-status reptiles). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 209 acres (81%) and temporary disturbance of approximately 51 acres (19%) of habitat for this species within the Landmark Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. See also, the discussion below regarding the large amount of suitable habitat that will be placed into permanent conservation easements as a result of the Project.

The Newhall Ranch Specific Plan Program EIR concluded that the substantial loss of habitat, and potential impacts to individuals of this species, would be considered an unavoidable significant impact; however, the mitigation proposed in the Specific Plan EIR was not as extensive as this Recirculated Landmark Village EIR. See **Subsection 9.b.(1)(b), Wildlife Habitat Loss**, for a discussion of project-related impacts to special-status wildlife due to habitat loss. In addition to the mitigation measures described above, a total of 6,113,726 acres of potential suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Additional mitigation to that in the Newhall Ranch Specific Plan Program EIR includes **LV 4.4-2** (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Landmark Village); **LV 4.4-6** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and **LV 4.4-28** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not

significant. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

San Bernardino ringneck snake (*Diadophis punctatus modestus*). The San Bernardino ringneck snake is designated by CDFG as a California Special Animal. The ringneck snake is found in moist habitats, including woodlands, hardwood and conifer forest, grassland, sage scrub, chaparral, croplands/hedgerows, and gardens (NatureServe 2007; Stebbins 2003). San Bernardino ringneck snakes were not trapped or otherwise observed during surveys conducted on portions of the Specific Plan area in 2004 and 2006 (Impact Sciences, Inc., 2006A). Suitable habitat occurs at the project site in association with scrub, chaparral, riverbank and oak woodland habitats, and San Bernardino ringneck snake is presumed to occur in portions of the site supporting these habitat types. Construction-related activities could result in direct impacts to individual animals. In order to reduce impacts to this subspecies, the Project applicant would implement two mitigation measures designed to capture and relocate animals away from the work area prior to construction. The captured animals would be handled by qualified biologists and placed in a pre-approved area capable of supporting the subspecies. In addition, the Project applicant would conduct biological monitoring during ground disturbing activities in an effort to salvage animals that may be uncovered during construction activities. Applicable mitigation measures are **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-20** (surveys to capture and relocate special-status reptiles). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 263 acres (72%) and temporary disturbance of approximately 102 acres (28%) of habitat for this species within the Landmark Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. See also, the discussion below regarding the large amount of suitable habitat that will be placed into permanent conservation easements as a result of the Project Note also that approximately 338 acres (28%) of suitable habitat on site would not be impacted and approximately 6,060 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The Newhall Ranch Specific Plan Program EIR concluded that the substantial loss of habitat, and potential impacts to individuals of this species, would be considered an unavoidable significant impact; however, the mitigation proposed in the Specific Plan EIR was not as extensive as this Recirculated Landmark Village EIR. See **Subsection 9.b.(1)(b), Wildlife Habitat Loss**, for a discussion of project-related impacts to special-status wildlife due to habitat loss. In addition to the mitigation measures described above, a total of 6,113,060 acres of potential suitable habitat will be protected and managed in

three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Additional mitigation to that in the Newhall Ranch Specific Plan Program EIR includes LV 4.4-2 (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Landmark Village); LV 4.4-6 (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and LV 4.4-28 (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Coast patch-nosed snake (*Salvadora hexalepis virgulata*). The coast patch-nosed snake is listed as a California Species of Special Concern. It occupies desert scrub, coastal chaparral, washes, sandy flats, and rocky areas. Coast patch-nosed snakes were not trapped or otherwise observed during surveys conducted on portions of the Specific Plan area in 2004 and 2006 (Impact Sciences, Inc., 2006A). The Project area is located towards the northern extent of the subspecies' range (Stebbins 2003), and based on the CNDDDB, the coast patch-nosed snake has only been documented south of the Project area. Suitable habitat occurs in association with scrub habitat on site, and coast patch-nosed snake is presumed to occur in areas supporting this habitat type. Construction-related activities could result in the direct impacts to individual animals. In order to reduce impacts to this species, the Project applicant would implement a series of mitigation measures designed to capture and relocate animals away from the work area prior to construction. The captured animals would be handled by qualified biologists and placed in a pre-approved area capable of supporting the species. In addition, the Project applicant would conduct biological monitoring during ground disturbing activities in an effort to salvage animals that may be uncovered during construction activities. Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). Additional applicable mitigation measures are **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-20** (surveys to capture and relocate special-status reptiles). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 209 acres (81%) and temporary disturbance of approximately 51 acres (19%) of habitat for this species within the Landmark Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. See also, the discussion below regarding the large amount of suitable habitat that will be placed into permanent conservation easements as a result of the Project Note also that

~~approximately 212 acres (22%) of suitable habitat on site would not be impacted and approximately 3,726 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.~~

The Newhall Ranch Specific Plan Program EIR concluded that the substantial loss of habitat, and potential impacts to individuals of this species, would be considered an unavoidable significant impact; however, the mitigation proposed in the Specific Plan EIR was not as extensive as this Recirculated Landmark Village EIR. See **Subsection 9.b.(1)(b), Wildlife Habitat Loss**, for a discussion of project-related impacts to special-status wildlife due to habitat loss. In addition to the mitigation measures described above, a total of 6,113,726 acres of potential suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Additional mitigation to that in the Newhall Ranch Specific Plan Program EIR includes LV 4.4-2 (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Landmark Village); LV 4.4-6 (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and LV 4.4-28 (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

South coast garter snake (*Thamnophis sirtalis* ssp.). The south coast garter snake is designated by CDFG as a California Species of Special Concern. No focused surveys have been conducted for this species, and no observations have been noted in previous wildlife surveys for other riparian and aquatic species (SMEA 1995; Aquatic Consulting Services, Inc., 2002A, 2002B, 2002C, 2002D; Impact Sciences, Inc., 2002; Compliance Biology, Inc., 2004D; Impact Sciences, Inc., 2001; Ecological Sciences, Inc., 2004A). ~~Natural~~ This species is very uncommon, but natural history records for the south coast garter snake in California include sightings from Santa Clara River Valley (Ventura County), south to San Pasqual (San Diego County) (NatureServe 2007). Suitable habitat for the species occurs on site in association with marsh, riparian and adjacent habitats. The removal of riparian vegetation and construction activities associated with the proposed bridge and/or bank protection could result in impacts to individual south coast garter snakes. Impacts to the south coast garter snake would be potentially significant, depending on the number and extent of this species that may be disturbed or removed. Implementation of proposed Mitigation Measures LV 4.4-10 (development of a Stream Crossing and Diversion Plan), LV 4.4-11 (regulating stream diversion bypass channels and dewatering), LV 4.4-13 (installation of structures within the riverbed not to impair movement of aquatic life), LV 4.4-14 (prevention of mud and pollutants from entering streams and storm flows), LV 4.4-15 (restriction of construction activities in the riverbed to

specified areas), LV 4.4-16 (surveys of riverbed area for, two-striped garter snake and south coast garter snake), and LV 4.4-18 (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) would reduce impacts to the species to a less than significant level.

Implementation of the proposed project would also result in the permanent loss of approximately 22 acres (25%) and temporary disturbance of approximately 65 acres (75%) of habitat for this species within the Landmark Village project site. Approximately 833 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Although the project would affect a relatively small amount of south coast garter snake habitat, the species is quite rare in Southern California, where urbanization has caused substantial habitat loss. Because the project would contribute to this trend, its impact on the species would be significant, absent mitigation. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Bell's sage sparrow (*Amphispiza belli belli*). The Bell's sage sparrow is not state or federally endangered, but is on CDFG Watch List and is a USFWS Bird of Conservation Concern. This species has been observed off site in Castaic Mesa (Compliance Biology 2006A), near Soledad Canyon in 2002 (Compliance Biology 2003), and in the Legacy Village project site, adjacent to the NRSP and Salt Creek area (Guthrie 2004C). The scrub habitats on the off-site grading sites provide suitable nesting habitat for this species. Should this species occur on the site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of this species' bird nests that may be disturbed or removed, the loss of active nests would be a potentially significant impact. In order to avoid impacts to this species, the Project applicant would implement mitigation measures to reduce the impacts to Bell's sage sparrow before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). This impact would also be reduced through the implementation of Mitigation Measures **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for active nests). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 48 acres (99%) and temporary disturbance of approximately 0.4 acre (0.8%) of habitat for this species within the Landmark Village project site. Approximately 1,488 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Although all on-site habitat would be impacted, it is a small amount of habitat and the species has not been observed on site. Further, a large amount of suitable habitat would be preserved and managed. For these reasons, project impacts to Bell's sage sparrow habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

The Newhall Ranch Specific Plan Program EIR concludes that due to the substantial loss of habitat, and potentially direct impacts to individuals, resulting from buildout of the Specific Plan, impacts to Bell's sage sparrow would be considered unavoidably significant impact; however, the mitigation proposed in the Specific Plan EIR was not as extensive as this Recirculated Landmark Village EIR. ~~See Subsection 9.b.(1)(b),~~ See Wildlife Habitat Loss above, for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Black-chinned sparrow (*Spizella atrogularis*). The black-chinned sparrow is designated by CDFG as a California Special Animal and is a USFWS Bird of Conservation Concern. This species is not federally listed as threatened or endangered within any part of its range. The black-chinned sparrow was not detected within the Project area or region. The species has not been detected in the area for over a dozen years; it is not believed to occur within the Project area. However, the species is likely to occur as a migrant on sage scrub- and chaparral-covered hillsides and a few could remain to breed on more rugged slopes on the borrow and grading sites. Should this species occur on the site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of this species' bird nests that may be disturbed or removed, the loss of active nests would be a potentially significant impact. The Project applicant would implement mitigation measures to reduce or avoid impacts to black-chinned sparrow before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). This impact would also be reduced through the implementation of Mitigation Measures **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **LV 4.4-21** (pre-construction surveys for nesting native bird species and construction setbacks for active nests). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Implementation of the proposed project would also result in the permanent loss of approximately 206 acres (85%) and temporary disturbance of approximately 38 acres (15%) of habitat for this species within the Landmark Village project site. Approximately 3,486 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Although a large amount of habitat would be impacted, the black-chinned sparrow has not been observed in the project vicinity during surveys and is not expected to nest on site. Further, a large amount of suitable habitat would be preserved and managed. For these reasons, project impacts to habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

Ringtail Cat (*Bassariscus astutus*). The ringtail cat (ringtail) is a California Fully Protected species. Suitable habitat for ringtails consists of broken semi-arid country with a mixture of hardwood forest and shrubland in close association with rocky areas or riparian habitats (Poglayen-Neuwall and Toweill 1988; Zeiner *et al.* 1990B). Although no ringtails were documented during the mammal survey, Impact Sciences (2005) concluded that the species has a moderate potential to occur ~~on-site~~ in the project vicinity in dense woodland or riparian areas. However, in addition to the negative Impact Sciences (2005) study findings, this species has never been observed in the numerous wildlife surveys conducted in the Specific Plan area, including recent wildlife surveys conducted by Dudek (2006A, 2006B, 2006C, 2006D). Should ringtail be present, construction-related activity could result in the loss of individual ringtail. Potentially significant impacts to ringtail could occur without mitigation, depending on the number and extent of the species on site that may be disturbed or removed. In order to reduce impacts to this species, the project applicant would implement several mitigation measures designed to avoid impacts, including conducting pre-construction surveys for ringtail in suitable habitat in and within 300 feet of the construction zone and, if the species is observed in the breeding and rearing period, no construction-related activities shall occur within 300 feet until it has been determined that construction activities would not adversely affect the rearing of young. In addition, the Project applicant would conduct biological monitoring during ground disturbing activities, in an effort to salvage animals that may be discovered during construction activities. These measures will reduce impacts to badger individuals to the extent feasible and practicable. Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). Additional applicable mitigation measures are **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities), **LV 4.4-28** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation), and **LV 4.4-52** (ringtail avoidance). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 8.1 acres (21%) and temporary disturbance of approximately 31 acres (79%) of habitat for this species within the Landmark Village project site. Approximately 1,179 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. This species is rare in Southern California and its habitat has substantially declined due to urbanization. Because the project would contribute to this trend, its impacts on the ringtail would be significant, absent mitigation. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Townsend's big-eared bat (*Corynorhinus townsendii townsendii*), California Species of Special Concern; **western small-footed myotis** (*Myotis ciliolabrum*), California Species of Special Concern; and **long-legged myotis** (*Myotis volans*), California Species of Special Concern have not been observed on the project site, but given the presence of suitable habitat, these species could roost and/or forage on or adjacent to the site. Should active bat roosts be present, construction-related activity could result in the direct loss or abandonment of active roost sites. In order to reduce impacts to this species, the Project applicant would implement mitigation measures designed to avoid direct impacts to pallid bat individuals during construction and to establish new day roosts should any existing day roosts be permanently lost as a result of the project. The applicable mitigation measure for impacts during construction is **LV 4.4-25** (pre-construction surveys for active roosts of special-status bats), which requires that, no earlier than 30 days prior to the commencement of construction activities, a pre-construction survey be conducted by a qualified biologist to determine whether active roosts of special-status bats, including the pallid bat, are present on or within 300 feet of the Project disturbance boundaries. Should an active maternity roost be identified (the breeding season of native bat species in California, including the pallid bat, generally occurs from April 1 through August 31), the roost shall not be disturbed and construction within 300 feet shall be postponed or halted, at the discretion of the biological monitor, until the roost is vacated and juveniles have fledged, as determined by the biologist. The applicable mitigation measure for permanent loss of a day roost is **LV 4.4-26** (day roost site replacement), which requires the Project applicant to prepare and implement a bat roost site creation plan that would establish (an) alternative roost site(s) within suitable preserved open space located at an adequate distance from sources of human disturbance and **LV 4.4-56** (culvert and bridge design to provide roosting habitat for bats), which requires a qualified biologist shall work with the project engineer to identify and incorporate structures into the design that

provide suitable roosting habitat for bat species occurring in the project area. Implementation of these mitigation measures would reduce this impact to a level that is not significant. The finding that impacts to special-status bats can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Townsend's big-eared bat, long-legged myotis, and western small-footed myotis forage in essentially the same habitats. Implementation of the proposed project would result in the permanent loss of approximately 268 acres (72%) and temporary disturbance of approximately 117 acres (28%) of foraging habitat for these species within the Landmark Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 6,265 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

Southern grasshopper mouse (*Onychomys torridus ramona*). The southern grasshopper mouse is designated by CDFG as a California Species of Special Concern. This species has not been detected on the project site or the greater Newhall Ranch Specific Plan area during small mammal trapping (Impact Sciences 2004). This species has the potential to occur on site in scrub and grassland habitat. Should this species occur on site, construction-related activities could result in direct impacts to the individual southern grasshopper mouse. In order to reduce impacts to this species, the Project applicant would conduct biological monitoring during ground-disturbing activities, in an effort to salvage animals that may be discovered during construction activities. These measures will reduce impacts southern grasshopper mouse individuals to the extent feasible and practicable. Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). Additional applicable Mitigation Measure **LV 4.4-18** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) would also be implemented. Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 197 acres (79%) and temporary disturbance of approximately 52 acres (21%) of habitat for this species within the Landmark Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to

a level less than significant. Note also that approximately 2,658 acres of habitat would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Impacts to Special-Status Wildlife Species Occurring Downstream of the Project Site

The following special-status wildlife species are known to, or could, occur within the Santa Clara River downstream of the Landmark Village project site: Santa Ana sucker, unarmored threespine stickleback, arroyo chub, southwestern pond turtle, and two-striped garter snake. The *Flood Technical Report for the Landmark Village Project* (PACE 2006) found that there would be no significant changes in water flows, velocities, depth, sedimentation, or floodplain and channel conditions downstream of the project site as a result of the proposed project (see Landmark Village Draft EIR, November 2006, Appendix 4.2). These hydraulic effects were also found to be insufficient to alter the amount, location, and nature of aquatic and riparian habitats in the project area and downstream into Ventura County. The technical analysis further determined that the river would still retain sufficient width to allow natural fluvial processes to continue; consequently, the mosaic of habitats in the river that support various special-status species would be maintained and the population of the species within and immediately adjacent to the river corridor would not be significantly affected. Based on that technical assessment, and the analysis of these species and their habitat described in the PACE 2006 report (these conclusions were reached by Entrix based upon the PACE report), no significant impacts to downstream populations of these special-status wildlife species are expected to occur.

(i) Sensitive Plant Communities

As discussed under **Subsection 9.b.(1)(i)**, three of the plant communities found within the Landmark Village project site are considered sensitive by CDFG: southern willow scrub, southern cottonwood-willow riparian, and big sagebrush scrub. Impacts to these sensitive plant communities are discussed below.

Herbaceous Wetlands

Herbaceous Wetland (NA/NA¹⁹). The proposed project would result in the permanent conversion of 0.4 acre of herbaceous wetland. An additional 3.1 acres would be temporarily disturbed by bank

¹⁹ A conservation status rank is not applicable because the species is not a suitable target for conservation activities.

(2) Indirect Impacts

Indirect impacts to biological resources would occur in those habitat areas surrounding the development envelope, as well as in remaining habitat areas within the proposed development area, both during and after the completion of the proposed project. Indirect impacts on biological resources as a result of project development on the site can include the following: (1) increased lighting and glare effects on wildlife species in remaining and adjacent open space areas; (2) a potential increase in pesticides, herbicides and pollutants into adjacent drainages, creeks, rivers and wetlands, as a result of landscaping irrigation and stormwater runoff; (3) an increase in non-native plant and wildlife species that are adapted to more urban environments and can out-compete native species for available resources, thus reducing the distribution and population of native species; (4) increased human activity and domestic animal presence that can disturb natural habitat areas and displace wildlife populations; and (5) erosion and dust resulting from construction/grading activities.

Indirect impacts associated with the proposed project are not quantifiable, but are reasonably foreseeable. As such, the following discussion identifies expected types of secondary impacts and their relative magnitude, such that decision makers and the general public are aware of the indirect impact potential associated with implementation of the proposed project. The following discussions are not species-specific, in contrast to the discussions of direct impacts above. Nevertheless, general classes of indirect impacts are relevant to suites of species, whether through alterations of behavior or physiology, and those effects are indicated, in the discussions of indirect impact types. This type of analysis is consistent with the requirements of CEQA.

(a) Increased Light and Glare

The development of a residential community would increase the number of nighttime light and glare sources on the site over current levels, which are very low to nonexistent. Nighttime lighting can disturb nesting and foraging behavior, can potentially alter breeding cycles and nesting behavior, and can make some wildlife (e.g., rodents) more vulnerable to predation. If uncontrolled, artificial light near riparian areas associated with the Santa Clara River and Castaic Creek could adversely impact the composition and behavior of the animal species that occur in these areas. Due to its potential to disrupt breeding, movement, and foraging behavior of wildlife species and increase predation risk, increased nighttime lighting and glare from proposed project is a significant impact. Implementation of Specific Plan Mitigation Measure **SP 4.6-56** (downcast lighting design along the boundaries of natural areas) and Mitigation Measure LV 4.4-60 (bridges of the Santa Clara River will be designed to minimize impacts to natural areas and riparian resources from associated lighting and stormwater runoff) would reduce potential impacts resulting from increased light and glare to below a level of significance.

charity car washing. Other sources of MBAS, such as cross connections between sanitary and storm sewers, are unlikely given modern sanitary sewer installation methods and inspection and maintenance practices. Therefore, MBAS are not expected to significantly impact the receiving waters of the proposed project.

Bioaccumulation: The primary pollutants that are of concern with regard to bioaccumulation are mercury and selenium. Mercury and selenium will not be introduced by the project and are not naturally present at levels of concern in the Santa Clara River watershed (GeoSyntec 2005). On that basis, the potential for bioaccumulation in the project PDFs or in the Santa Clara River and attendant adverse effects on waterfowl and other species is considered less than significant.

In addition, the proposed Project would benefit from Mitigation Measure LV 4.4-60 (bridges of the Santa Clara River will be designed to minimize impacts to natural areas and riparian resources from associated lighting and stormwater runoff).

(c) Increase in Populations of Non-Native Plant and Wildlife Species

After project completion, a number of non-native plant species that are more adapted to urban environments could increase in population and potentially displace native species within the riparian corridor because of the ability of non-natives to compete more effectively for resources. The degree to which non-native plant species will displace native species in adjacent habitat areas is unknown. However, because non-native and exotic plants are commonly included in landscaping plans of both common areas and private lots of new development projects, project development could result in identifiable increases in non-native and/or exotic plant populations.

In particular, non-native plant species are often more adapted to a wider variety of growing conditions and can out-compete native plant populations for available nutrients, prime growing locations, and other resources. Because these plants reproduce so quickly and in such large numbers, these species can quickly replace many native plant populations, resulting in lower native species diversity, loss of suitable breeding and/or nesting habitat for common and special-status wildlife species, changes to the riparian ecosystem, and overall reductions in habitat values. Therefore, the impact on native biological resources as a result of increased non-native plant species is considered potentially significant. Implementation of proposed Mitigation Measure LV 4.4-44 (review of plant palettes and inspection of container plants for use within 100 feet of native vegetation for pests and disease; restrictions on invasive plants and irrigation) would reduce the magnitude of impacts resulting from an increased non-native population to below a level of significance.

Urban development also tends to attract wildlife species that are more typical of, and more adaptable to, urban settings, including bullfrogs, African clawed frogs, house sparrows, European starlings, rock doves, brown-headed cowbirds, American crows, ravens, striped skunks, opossum, red foxes, raccoons, and Norway rats. An increase in meso-predators (i.e., skunk, opossum, fox) in an area can adversely impact native rodent and bird populations. Additionally, a number of native species are not adapted to urban development and their populations tend to decrease in the vicinity of residential or recreational

**Table 4.4-10
Significant Impact and Mitigation Summary**

Significant Impact	Relevant Previously Adopted Measures	Additional Measures Proposed by EIR	Significance After Mitigation	Consistency with Findings of Newhall Ranch Specific Plan EIR
Impacts to Coastal Scrub	<u>SP 4.6-17 to 19, SP 4.6-21 to SP 4.4-27, and SP 4.6-37 to SP 4.6-42.</u> These measures would protect in perpetuity 1,311 acres of coastal scrub in the High Country SMA/SEA 20. The protection of the Salt Creek Area would preserve and additional 631 acres of this community type.	<u>LV 4.4-2, LV 4.4-49, and LV 4.4-57 to LV 4.4-59</u>	Less than significant	Inconsistent
Impacts to Riparian Plant Communities (i.e., Mulefat Scrub, Southern Willow Scrub, Southern Cottonwood-Willow Riparian, Arrow Weed Scrub, Alluvial Scrub, and River Wash).	<u>SP 4.6-1 to SP 4.6-26, SP 4.6-63.</u> These measures would protect in perpetuity 977.5 acres of habitat along the Santa Clara River.	<u>LV 4.4-1, LV 4.4-15, LV 4.4-28, LV 4.4-29 through LV 4.4-41, LV 4.4-63, LV 4.4-64</u>	Less than Significant	Consistent
Impacts to Big Sagebrush Scrub	<u>SP 4.6-1 through SP 4.6-16, SP 4.6-21 through SP 4.6-26, SP 4.6-28</u>	<u>LV 4.4-1, LV 4.4-15, LV 4.4-18, LV 4.4-29 through LV 4.4-33</u>	Less than Significant	Consistent
Impacts to Wildlife Upland Habitat	<u>SP 4.6-21 through SP 4.6-26, SP 4.6-27, SP 4.6-28, SP 4.6-17, SP 4.6-29, SP 4.6-33, SP 4.6-20, SP 4.6-34, SP 4.6-35, SP 4.6-36 through SP 4.6-42, SP 4.6-43, and SP 4.6-48.</u> The preservation of the River Corridor SMA/SEA 23 and High Country SMA/SEA 20 would protect approximately 5,182 acres of wildlife habitat in perpetuity. The preservation of the Salt Creek Area would protect an additional 1,518 acres of wildlife habitat in perpetuity.	<u>LV 4.4-2, LV 4.4-6, LV 4.4-21, LV 4.4-62</u>	Less Than Significant	Inconsistent
Restrictions of Wildlife Movement Corridors/Habitat Linkages	<u>SP 4.6-1 to SP 4.6-26, SP 4.6-37 to SP 4.6-42, SP 4.6-56.</u> The preservation of the River Corridor SMA/SEA 23 would protect a regionally important wildlife movement corridor. The preservation of the High Country SMA/SEA 20 would protect a large area of habitat south of the River Corridor SMA/SEA 23 (which would be linked to the River Corridor SMA/SEA 23 by the preservation of the Salt Creek Area).	<u>LV 4.4-42, LV 4.4-57</u>	Less than Significant	Inconsistent. Given that the tract map site is currently used for agriculture and is frequently devoid of cover, the tract map site is not expected to be a substantial part of a regional north-south wildlife movement corridor.
Impacts to Slender Mariposa Lily	<u>SP 4.6-27, SP 4.6-29 to SP 4.6-32, SP 4.6-33, SP 4.6-34, SP 4.6-37 to SP 4.6-42, SP 4.6-53, SP 4.6-59.</u>	<u>LV 4.4-5, LV 4.4-18.</u> Approximately 559 acres considered suitable for slender mariposa lily mitigation have been identified in the High Country SMA/SEA 20 and Salt Creek Area (Dudek 2007).	Less than Significant	Consistent

Significant Impact	Relevant Previously Adopted Measures	Additional Measures Proposed by EIR	Significance After Mitigation	Consistency with Findings of Newhall Ranch Specific Plan EIR
Impacts to Southern California Black Walnut	SP 4.6-1 to SP 4.6-19, SP 4.6-21 to SP 4.6-35, SP 4.6-37 to SP 4.6-48. The preservation of the River Corridor SMA/SEA 23 and the High Country SMA/SEA 20 would protect approximately 585 acres of oak woodland and 300 acres of valley oak/grass in perpetuity. The preservation of the Salt Creek Area would protect approximately 266 acres of oak woodland and 113 acres of valley oak/grassland in perpetuity. In total, conservation easements would be placed over 851 acres of oak woodland and 413 acres of oak savannah (including the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek Area).	LV 4.4-1, LV 4.4-2, LV 4.4-6, LV 4.4-15, LV 4.4-18, LV 4.4-29 to LV 4.4-41	Less than Significant	Consistent
Impacts to Parish’s Sagebrush	SP 4.6-1 to SP 4.6-16, SP 4.6-21 to SP 4.6-26, SP 4.6-28.	LV 4.4-1, LV 4.4-2, LV 4.4-15, LV 4.4-18, LV 4.4-29 through LV 4.4-41	Less than Significant	The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.
Impacts to Everlasting	SP 4.6-16, SP 4.6-20, SP 4.6-24, SP 4.6-53, SP 4.6-59.	LV 4.4-3, LV 4.4-4, LV 4.4-18	Less than Significant	The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.
Impacts to San Fernando Valley Spineflower	SP 4.6-65 to SP 4.6-80.	None proposed.	Less than Significant	Consistent
Impacts to Protected Oaks Coast Live Oak Woodland, and Southern Coast Live Oak Riparian Forest	SP 4.6-1 to SP 4.6-19, SP 4.6-21 to SP 4.6-35, SP 4.6-37 to SP 4.6-48. The preservation of the River Corridor SMA/SEA 23 and the High Country SMA/SEA 20 would protect approximately 585 acres of oak woodland and 300 acres of oak savannah in perpetuity. The preservation of the Salt Creek Area would protect approximately 266 acres of oak woodland and 113 acres of oak savannah in perpetuity. In total, conservation easements would be placed over 851 acres of oak woodland and 413 acres of oak savannah (including the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek Area).	LV 4.4-1, LV 4.4-2, LV4.4-6, LV 4.4-7, LV 4.4-15, LV 4.4-18, LV 4.4-28 through LV 4.4-39	Less than Significant	Consistent
<u>Impacts to Terrestrial Mollusks (Trask shoulderband snail)</u>	<u>SP 4.6-1 through SP 4.6-27, SP 4.6-32 through SP 4.6-42, SP 4.6-53, SP 4.6-59, SP 4.6-63</u>	<u>LV 4.4-15, LV 4.4-1, LV 4.4-2, LV 4.4-29 through MV 4.4-41, LV 4.4-46, LV 4.4-48, LV 4.4-51, LV 4.4-43, LV 4.4-49, LV 4.4-44</u>	<u>Less than Significant</u>	<u>The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection of other terrestrial gastropod species during more recent surveys and</u>

Significant Impact	Relevant Previously Adopted Measures	Additional Measures Proposed by EIR	Significance After Mitigation	Consistency with Findings of Newhall Ranch Specific Plan EIR
				<u>presence of suitable habitat for Trask shoulderband snail warrants its inclusion in this analysis.</u>
Impacts to Special-Status Fish Species (i.e., Santa Ana Sucker, Unarmored Threespine Stickleback, and Arroyo Chub)	SP 4.6-53 SP 4.6-54, SP 4.6-57, SP 4.6-58, SP 4.6-59, SP 4.6-44.	LV 4.4-8 to LV 4.4-15, LV 4.4-43	Less than Significant	Consistent
Impacts to Special-Status Amphibians and Aquatic Associated Reptiles (i.e., Arroyo Toad, Two-Striped Garter Snake, South Coast Garter Snake, and Southwestern Pond Turtle)	SP 4.6-53, SP 4.6-55, SP 4.6-58, SP 4.6-59.	LV 4.4-9 to LV 4.4-18	Less than Significant	Consistent
Impacts to Western Spadefoot Toad and California Red-Legged Frog	SP 4.6-53, SP 4.6-55, SP 4.6-58, SP 4.6-59.	LV 4.4-10, LV 4.4-12 to LV 4.4-14, LV 4.4-18, LV 4.4-19, LV 4.4-55	Less than Significant	Consistent
Impacts to Upland-Associated Special-Status Reptiles (i.e., Coast Horned Lizard, Silvery Legless Lizard, Coastal Western Whiptail, Rosy Boa, San Bernardino Ringneck Snake, and Coast Patch-Nosed Snake)	SP 4.6-37 to SP 4.6-42, SP 4.6-53, SP 4.6-59. The preservation of High Country SMA/SEA 20 would protect in perpetuity 4,205 acres of habitat. The preservation of the Salt Creek Area would preserve an additional 1,518 acres of habitat.	LV 4.4-18, LV 4.4-20	Less than significant	Inconsistent
Impacts to Special-Status Bird Species (i.e., Least Bell's Vireo, Willow Flycatcher, Southwestern Willow Flycatcher, Western Yellow-Billed Cuckoo, Cooper's Hawk, Sharp-Shinned Hawk, Ferruginous Hawk, Tricolored Blackbird, Lawrence's Goldfinch, Tuekey Vulture, Northern Harrier, Yellow Warbler, White-Tailed Kite, Yellow-Breasted Chat, Southern California Rufous-Crowned Sparrow, Western Burrowing Owl, California Horned Lark, Merlin, Prairie Falcon, American Peregrine Falcon, California Condor, Loggerhead Shrike, Long-Eared Owl, Summer Tanager, Coastal California Gnatcatcher, Vermilion Flycatcher, Golden Eagle, Short-Eared Owl, Costa's Hummingbird, Yellow-Headed Blackbird, Allen's/Rufous Hummingbird, Nuttall's Woodpecker, Chipping Sparrow, Black-Crowned Night Heron, and Oak Titmouse)	SP 4.6-53, SP 4.6-59	LV 4.4-18, LV 4.4-21, LV 4.4-22, <u>LV 4.4-61, LV 4.4-65, LV 4.4-66</u>	Less than Significant	Inconsistent – the Tricolored Blackbird, Northern Harrier, White-Tailed Kite, Southern California Rufous-Crowned Sparrow, Western Burrowing Owl, Golden Eagle, Mountain Plover, Ferruginous Hawk and Sharp Shinned Hawk were found to be significantly impacted in the Newhall Ranch Specific Plan EIR, prior to the additional mitigation measures incorporated in this Recirculated Landmark Village EIR.
Impacts to San Diego Desert Woodrat, San Diego Black-Tailed Jackrabbit, Black Bear, American Badger, Mountain Lion, and Mule Deer.	SP 4.6-53, SP 4.6-59	LV 4.4-18, LV 4.4-20 , LV 4.4-23 (<u>jackrabbit and woodrat only</u>), LV 4.4-24 (<u>badger only</u>), LV 4.4-28	Less than Significant	Inconsistent
Impacts to Pallid Bat, Western Mastiff Bat, Western Red Bat, Long-Legged Myotis, Pocketed Free-tailed Bat, Townsend's Big-Eared Bat, Western Small-Footed Myotis, Fringed Myotis, Yuma Myotis	No applicable measures.	LV 4.4-25, LV 4.4-26, <u>LV 4.4-56</u>	Less than Significant	Consistent (The Newhall Ranch Specific Plan Program EIR did not address potential impacts to each of these species, given their limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.)
Restriction of Wildlife Habitat Linkages	SP 4.6-18	LV 4.4-42	Less than Significant	Consistent
Increased Light and Glare	SP 4.6-56	None proposed. <u>LV 4.4-60.</u>	Less than Significant	Consistent
Increase in Populations of Non-Native Plant and Wildlife Species	No applicable measures.	LV 4.4-44 through LV 4.4-46, LV 4.4-27, LV 4.4-51	Less than Significant	Consistent
Increased Human and Domestic Animal Presence	SP 4.6-17 to SP 4.6-19	LV 4.4-27, LV 4.4-44 to LV 4.4-48, LV 4.4-49	Less than Significant	Inconsistent

c. Additional Measures Incorporated into the EIR

To further reduce the magnitude of impacts to biological resources that would result from project implementation, the following mitigation measures are recommended and incorporated into this EIR:

LV 4.4-1 Mitigation Measures **SP 4.6-1** through **SP 4.6-16** specify requirements for riparian mitigation conducted in the High Country SMA/SEA 20, Salt Creek area, and Open Area. The applicant will prepare and implement a plan for mitigation of both riparian and upland habitats (such as riparian adjacent big sagebrush scrub), and incorporates these Mitigation Measures (**SP 4.6-1** through **SP 4.6-16**). A Comprehensive Mitigation Implementation Plan (CMIP) has been developed by Newhall Land that provides an outline of mitigation to offset impacts. The CMIP demonstrates the feasibility of creating the required mitigation acreage to offset project impacts (see LV 4.4-29). The CMIP does not identify mitigation actions specific to impacts on waters of the United States. But since these waters are a subset of CDFG jurisdiction, the necessary Corps mitigation requirements would be met or exceeded.²²

Detailed riparian/wetlands mitigation plans, in accordance with the CMIP, shall be submitted to, and are subject to the approval of, the Corps and CDFG as part of the sub-notification letters for individual projects. Individual project submittals shall include applicable CMIP elements, complying with the requirements outlined below. The detailed wetlands mitigation plan shall specify, at a minimum, the following: (1) the location of mitigation sites; (2) site preparation, including grading, soils preparation, irrigation installation, (2a) the quantity (seed or nursery stock) and species of plants to be planted (all species to be native to region); (3) detailed procedures for creating additional vegetation communities; (4) methods for the removal of non-native plants; (5) a schedule and action plan to maintain and monitor the enhancement/restoration area; (6) a list of criteria by which to measure success of the mitigation sites (*e.g.*, percent cover and richness of native species, percent survivorship, establishment of self-sustaining native plantings, maximum allowable percent of non-native species); (7) measures to exclude unauthorized entry into the creation/enhancement areas; and (8) contingency measures in the event that mitigation efforts are not successful. ~~The individual project~~ detailed wetlands mitigation plans shall also classify the biological value (as "high," "moderate," or "low") of the vegetation communities to be disturbed as defined in these conditions, or may be based on an agency-approved method (*e.g.*, Hybrid Assessment of Riparian Communities (HARC)). The biological value shall be used to determine mitigation replacement ratios required under LV 4.4-29 and LV 4.4-37. The detailed wetlands mitigation plans shall provide for the 3:1 replacement of any Southern California black walnut to be removed from the riparian corridor for individual projects. The plan shall be subject to the approval of ~~the~~ CDFG and the Corps and approved prior to the impact to riparian resources. LV 4.4-31 describes that the functions and values will be assessed for the riparian areas that will be removed, and LV 4.4-29 and LV 4.4-37 describe the replacement ratios for the habitats that will be impacted.

²² For detailed information concerning the Corps compensatory mitigation program for impacts to waters of the United States, please reference the Corps' Record of Decision (August 2011) and the Section 404(b)1 Alternatives Analysis, included in the Final EIS/EIR for the Newhall Ranch RMDP/SCP project.

- LV 4.4-2 Approximately ~~1556.57~~ acres of coastal scrub shall be preserved on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Landmark Village. ~~The functional values of any burned dedicated land areas shall be evaluated annually until such time that conditions are commensurate with the quality of the impacted habitat being mitigated. In the event that the functional value of this burned habitat has not recovered within five years of the dedication due to invasive species, to fire ecology, erosion, drought, or unforeseen events, then adaptive management pursuant to LV 4.4-59 will be implemented for coastal scrub restoration. This measure ensures that preserved areas will be part of a greater managed preserved system of numerous natural vegetation communities meant to support both common and special-status wildlife species. These areas support the same types of habitat that would be lost through construction and would be further enhanced through management and monitoring activities.~~
- LV 4.4-3 Focused surveys for the undescribed species of everlasting (a special-status plant species) shall be conducted by a qualified botanist prior to the commencement of grading/construction activities wherever suitable habitat (primarily river terraces) could be

LV 4.4-5 The Draft RMDP Slender Mariposa Lily Mitigation and Monitoring Plan (Dudek 2007I) shall be revised and submitted to CDFG and the County for review and approval prior to ground disturbance to occupied habitat. Upon approval, the plan will be implemented by the applicant or its designee. The revised plan will demonstrate the feasibility of enhancing or restoring slender mariposa lily habitat in selected areas to be managed as natural open space (*i.e.*, the Salt Creek area or High Country SMA/SEA 20, spineflower preserves, or River Corridor SMA/SEA 23) without conflicting with other resource management objectives. Habitat replacement/enhancement will be at a 1:1 ratio (acres restored/enhanced to acres impacted).

The revised plan will describe habitat improvement/restoration measures to be completed prior to introducing slender mariposa lily. Habitat improvement/restoration will be based on native occupied slender mariposa lily habitat. The revised plan will specify: (1) the location of mitigation sites (may be selected from among 559 acres of suitable mitigation land in the High Country SMA/SEA 20 and Salt Creek area identified in the Draft Newhall Ranch Mitigation Feasibility Study (Dudek 2007A); (2) a description of "target" vegetation (native shrubland or grassland) to include estimated cover and abundance of native shrubs and grasses in occupied slender mariposa lily habitat on Newhall Ranch land (either at sites to be destroyed by construction or at sites to be preserved); (3) site preparation measures to include topsoil treatment, soil decompaction, erosion control, temporary irrigation systems, or other measures as appropriate; (4) methods for the removal of non-native plants (*e.g.*, mowing, weeding, raking, herbicide application, or burning); (5) the source of all plant propagules (seed, potted nursery stock, *etc.*), the quantity and species of seed or potted stock of all plants to be introduced or planted into the restoration/enhancement areas; (6) a schedule and action plan to maintain and monitor the enhancement/restoration areas, to include at minimum, qualitative annual monitoring for revegetation success and site degradation due to erosion, trespass, or animal damage for a period no less than two years; (7) as needed where sites are near trails or other access points, measures such as fencing, signage, or security patrols to exclude unauthorized entry into the restoration/enhancement areas; and (8) contingency measures such as replanting, weed control, or erosion control to be implemented if habitat improvement/restoration efforts are not successful.

Habitat restoration/enhancement will be judged successful when (1) percent cover and species richness of native species reach 50 percent of their cover and species richness at undisturbed occupied slender mariposa lily habitat at reference sites; and (2) the replacement vegetation has persisted at least one summer without irrigation. At that point slender mariposa lily propagules (seed or bulbs) will be introduced onto the site.

The revised plan will specify methods to collect propagules and introduce slender mariposa lily into these mitigation sites. Introductions will use source material (seeds or bulbs) from no more than 1.0 mile distant, similar slope exposures, and no more than 500 ft. elevational difference from the mitigation site, unless otherwise approved by CDFG and the County. Bulbs may be salvaged and transplanted from slender mariposa lily occurrences to be lost; alternately, seed may be collected from protected occurrences, following CDFG-approved seed collection guidelines (*i.e.*, MOU for rare plant seed collection). No bulbs will be translocated into areas within 300 feet of proposed or existing development. Newhall Land or its designee will monitor the reintroduction sites for no fewer than five additional years to estimate slender mariposa lily survivorship (for bulbs) or seedling establishment (for seeded sites).

15. To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force (DAPTF 2009) will be followed at all times.
16. Drift fence/pitfall trap surveys will be implemented in toad sensitive areas prior to construction in an effort to reduce potential mortality to this species. Prior to any construction activities in the Project area, silt fence shall be installed completely around the proposed work area and a qualified biologist should conduct a preconstruction/clearance survey of the work area for arroyo toads. Any toads found in the work area should be relocated to suitable habitat. The silt fence shall be maintained for the duration of the work activity.
17. The applicant shall restrict work to daylight hours, except during an emergency, in order to avoid nighttime activities when arroyo toads may be present on the access road. Traffic speed should be maintained at 15 mph or less in the work area.

LV 4.4-18 Prior to grading and construction activities, a qualified biologist shall be retained to conduct a Worker Environmental Awareness Program (WEAP) for all construction/contractor personnel. A list of construction personnel who have completed training prior to the start of construction shall be maintained ~~retained~~ on site and this list shall be updated as required when new personnel start work. No construction worker may work in the field for more than five days without participating in the WEAP. The qualified biologist shall provide ongoing guidance to construction personnel and contractors to ensure compliance with environmental/permit regulations and mitigation measures. The qualified biologist shall perform the following:

1. Provide training materials and briefings to all personnel working on site. The material shall include but not be limited to the identification and status of plant and wildlife species, significant natural plant community habitats (e.g., riparian), fire protection measures, and review of mitigation requirements.
2. A discussion of the federal and state Endangered Species Acts, Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act, other state or federal permit requirements and the legal consequences of non-compliance with these acts;
3. Attend the pre-construction meeting to ensure that timing/location of construction activities do not conflict with other mitigation requirements (e.g., seasonal surveys for nesting birds, pre-construction surveys, or relocation efforts);
4. Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas. Maps showing the location of special-status wildlife or populations of rare plants, exclusion areas, or other construction limitations (e.g., limitations on nighttime work) will be provided to the environmental monitors and construction crews prior to ground disturbance. This applies to preconstruction activities, such as site surveying and staking, natural resources surveying or reconnaissance, establishment of water quality BMPs, and geotechnical or hydrological investigations;

5. Discuss procedures for minimizing harm to or harassment of wildlife encountered during construction and provide a contact person in the event of ~~the~~ the discovery of dead or injured wildlife;
6. Review/designate the construction area in the field with the contractor in accordance with the final grading plan;
7. Ensure that haul roads, access roads, and on-site staging and storage areas are sited within grading areas to minimize degradation of vegetation communities adjacent to these areas (if activities outside these limits are necessary, they shall be evaluated by the biologist to ensure that no special-status species habitats will be affected);
8. Conduct a field review of the staking (to be set by the surveyor) designating the limits of all construction activity;
- ~~8.9.~~ Flag or temporarily fence any construction activity areas immediately adjacent to riparian areas;
10. Ensure and document that required pre-construction surveys and/or relocation efforts have been implemented;

To reduce the potential for the spread of exotic invasive invertebrates (e.g. New Zealand mud snails) and weeds (including weed seeds) during Project clearing and construction, all heavy equipment proposed for use on the Project site shall be verified cleaned (including wheels, tracks, undercarriages, and bumpers, as applicable) before delivery to the Project site. Equipment must be documented as exotic invasive invertebrate (e.g. mud snail) and weed free upon delivery to the Project site initial staging area, including: (1) vegetation clearing equipment (skid steer loaders, loaders, dozers, backhoes, excavators, chippers, grinders, and any hauling equipment, such as off-road haul trucks, flat bed, or other vehicles); (2) earth-moving equipment (scrapers, dozers, excavators, loaders, motor-graders, compactors, backhoes, off-road water trucks, and off-road haul trucks); and (3) all Project-associated vehicles (including personal vehicles) that, upon inspection by the monitoring biologist, are deemed to present a risk for spreading exotic invasive invertebrates (e.g. mud snails) or weeds. Equipment shall be cleaned at existing construction yards or at a wash station.

The biological monitor shall document that all construction equipment (as described above) has been cleaned prior to working within the Project work site. Any equipment/vehicles determined to not be free of exotic invasive invertebrates (e.g. mud snails) and weeds shall immediately be sent back to the originating construction yard for washing, or wash station where rinse water is collected and disposed of in either a sanitary sewer or other legal point of disposal. Equipment/vehicles moved from the site must be inspected, and re-washed as necessary, prior to re-engaging in construction activities in the Project work area. A written daily log shall be kept for all vehicle/equipment washing that states the date, time, location, type of equipment washed, methods used, and location of work;

- ~~9.11.~~ Be present during initial vegetation clearing and grading; and

~~10.12.~~ Submit to the CDFG an immediate report (within 72 hours) of any conflicts or errors resulting in impacts to special-status biological resources.

LV 4.4-19 Prior to the ground disturbance ~~in aquatic areas~~, construction, or site preparation activities, the applicant shall retain the services of a qualified biologist to conduct pre-construction surveys for western spadefoot toad within all portions of the Project site containing suitable breeding habitat. Surveys shall be conducted during a time of year when the species could be detected (*e.g.*, the presence of rain pools). If western spadefoot toad is identified on the Project site, the following measures will be implemented.

1. Under the direct supervision of the qualified biologist, western spadefoot toad habitat shall be created within suitable natural sites on the Specific Plan site outside the proposed development envelope. The amount of occupied breeding habitat to be impacted by the Project shall be replaced at a 2:1 ratio. The actual relocation site design and location shall be approved by CDFG. The location shall be in suitable habitat as far away as feasible from any of the homes and roads to be built. The relocation ponds shall be designed such that they only support standing water for several weeks following seasonal rains in order that aquatic predators (*e.g.*, fish, bullfrogs, and crayfish) cannot become established. Terrestrial habitat surrounding the proposed relocation site shall be as similar in type, aspect, and density to the location of the existing ponds as feasible. No site preparation or construction activities shall be permitted in the vicinity of the currently occupied ponds until the design and construction of the pool habitat in preserved areas of the site has been completed and all western spadefoot toad adults, tadpoles, and egg masses detected are moved to the created pool habitat.
2. Based on appropriate rainfall and temperatures, generally between the months of February and April, the biologist shall conduct pre-construction surveys in all appropriate vegetation communities within the development envelope. Surveys will include evaluation of all previously documented occupied areas and a reconnaissance-level survey of the remaining natural areas of the site. All western spadefoot adults, tadpoles, and egg masses encountered shall be collected and released in the identified/created relocation ponds described above.
3. The qualified biologist shall monitor the relocation site for five years, involving annual monitoring during and immediately following peak breeding season such that surveys can be conducted for adults as well as for egg masses and larval and post-larval toads. Further, survey data will be provided to CDFG by the monitoring biologist following each monitoring period and a written report summarizing the monitoring results will be provided to CDFG at the end of the monitoring effort. Success criteria for the monitoring program shall include verifiable evidence of toad reproduction at the relocation site.

LV 4.4-20 Prior to construction the applicant shall develop a relocation plan for coast horned lizard, silvery legless lizard, coastal western whiptail, rosy boa, San Bernardino ringneck snake, and coast patch-nosed snake. The Plan shall include but not be limited to the timing and location of the surveys that would be conducted for each species; identify the locations where more intensive efforts should be conducted; identify the habitat and conditions in the proposed relocation site(s); the methods that would be utilized for trapping and relocating the individual species; and provide for the documentation/recordation of the species and

number of the animals relocated. The Plan shall be submitted to CDFG for approval 60 days prior to any ground disturbing activities within potentially occupied habitat.

The Plan shall include the specific survey and relocation efforts that would occur for construction activities that occur both during the activity period of the special status species (generally March to November) and for periods when the species may be present in the work area but difficult to detect due to weather conditions (generally December through February). Thirty days prior to construction activities in coastal scrub, chaparral, oak woodland, riparian habitats, or other areas supporting these species qualified biologists shall conduct surveys to capture and relocate individual coast horned lizard, silvery legless lizard, coastal western whiptail, rosy boa, San Bernardino ringneck snake, and coast patch-nosed snake in order to avoid or minimize take of these special-status species. The plan shall require a minimum of three surveys conducted during the time of year/day when each species is most likely to be observed. Individuals shall be relocated to nearby undisturbed areas with suitable habitat. If construction is scheduled to occur during the low activity period (generally December through February) the surveys shall be conducted prior to this period if possible and exclusion fencing shall be placed to limit the potential for re-colonization of the site prior to construction. The qualified biologist will be present during ground-disturbing activities immediately adjacent to or within habitat that supports populations of these species. Clearance surveys for special-status reptiles shall be conducted by a qualified biologist prior to the initiation of construction each day.

Results of the surveys and relocation efforts shall be provided to CDFG in the annual mitigation status report. Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.

- LV 4.4-21 Within 30 days of ground ~~disturbing~~ disturbance activities associated with construction or grading that would occur during the nesting/breeding season of native bird species potentially nesting on the site (typically March through August in the Project region, or as determined by a qualified biologist), the applicant shall have weekly surveys conducted by a qualified biologist to determine if active nests of bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the disturbance zone or within 300 feet (500 feet for raptors) of the disturbance zone. Pre-construction surveys shall include nighttime surveys to identify active rookery sites. The surveys shall continue on a weekly basis with the last survey being conducted no more than seven days prior to initiation of disturbance work. If ground ~~disturbing~~ disturbance activities are delayed, then additional pre-disturbance surveys shall be conducted such that no more than seven days will have elapsed between the survey and ground disturbing activities.

If active nests are found, clearing and construction within 300 feet of the nest (500 feet for raptors) shall be postponed or halted, at the discretion of the biologist in consultation with CDFG, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. In the event that golden eagles establish an active nest in the River Corridor SMA/SEA 23, the buffers will be established in consultation with CDFG. Potential golden eagle nesting will be reported to CDFG within 24 hours. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers and construction personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as a construction monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts ~~to~~ on these nests occur. Results of the surveys shall be provided to CDFG in the annual mitigation status report.

For listed riparian songbirds (least Bell's vireo, southwestern willow flycatcher, yellow-billed cuckoo) USFWS protocol surveys shall be conducted. If active nests are found, clearing and construction within 300 feet of the nest shall be postponed or halted, at the discretion of the biologist in consultation with CDFG and USFWS, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. If no active nests are observed, construction may proceed. If active nests are found, work may proceed provided that construction activity is located at least 300 feet from active nests (or as authorized through the context of the Biological Opinion and 2081b Incidental Take Permit). This buffer may be adjusted provided noise levels do not exceed 60 dB(A) hourly L_{eq} at the edge of the nest site as determined by a qualified biologist in coordination with a qualified acoustician.

If the noise meets or exceeds the 60 dB(A) L_{eq} threshold, or if the biologist determines that the construction activities are disturbing nesting activities, the biologist shall have the authority to halt the construction and shall devise methods to reduce the noise and/or disturbance in the vicinity. This may include methods such as, but not limited to, turning off vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nest site and the construction activities, and working in other areas until the young have fledged. If noise levels still exceed 60 dB(A) L_{eq} hourly at the edge of nesting territories and/or a no-construction buffer cannot be maintained, construction shall be deferred in that area until the nestlings have fledged. All active nests shall be monitored on a weekly basis until the nestlings fledge. The qualified biologist shall be responsible for documenting the results of the surveys and the ongoing monitoring and for reporting these results to CDFG and USFWS.

For coastal California gnatcatcher, the applicant shall conduct USFWS protocol surveys in suitable habitat within the Project area and all areas within 500 feet of access or construction-related disturbance areas. Suitable habitats, according to the protocol, include "coastal sage scrub, alluvial fan, chaparral, or intermixed or adjacent areas of grassland and riparian habitats." A permitted biologist shall perform these surveys according to the USFWS' (1997a) Coastal California Gnatcatcher Presence/Absence Survey Guidelines. If a territory or nest is confirmed, the USFWS and CDFG shall be notified immediately. If present, a 500-foot disturbance-free buffer shall be established and demarcated by fencing or flagging.

construction monitor during those periods when disturbance activities will occur near active nest areas to ensure that no inadvertent impacts to these nests will occur. If avoidance is not possible, the applicant will take the following sequential steps: (1) all understory vegetation will be cleared in the area immediately surrounding active nests followed by a period of one night without further disturbance to allow woodrats to vacate the nest, (2) each occupied nest will then be disturbed by a qualified wildlife biologist until all woodrats leave the nest and seek refuge off site, and (3) the nest sticks shall be removed from the Project site and piled at the base of a nearby hardwood tree (preferably a coast live oak or California walnut). Relocated nests shall not be spaced closer than 100 feet apart, unless a qualified wildlife biologist has determined that a specific habitat can support a higher density of nests. The applicant shall document all woodrat nests moved and provide a written report to CDFG.

All woodrat relocation shall be conducted by a qualified biologist in possession of a scientific collecting permit.

- LV 4.4-24 Thirty days prior to construction activities in grassland, scrub, chaparral, oak woodland, riverbank, and agriculture habitats, or other suitable habitat a qualified biologist shall conduct a survey within the proposed construction disturbance zone and within 200 feet of the disturbance zone for American badger.

If American badgers are present, occupied habitat shall be flagged and ground-disturbing activities avoided within 50 feet of the occupied den. Maternity dens shall be avoided during the pup-rearing season (February 15 through July 1) and a minimum 200 foot buffer established. This buffer may be reduced based on the location of the den upon consultation with CDFG. Maternity dens shall be flagged for avoidance, identified on construction maps, and a qualified biologist shall be present during construction. If avoidance of a non-maternity den is not feasible, badgers shall be relocated either by trapping or by slowly excavating the burrow (either by hand or mechanized equipment under the direct supervision of the biologist, removing no more than four inches at a time) before or after the rearing season (February 15 through July 1). Any relocation of badgers shall occur only after consultation with CDFG. A written report documenting the badger removal shall be provided to CDFG within 30 days of relocation.

Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.

- LV 4.4-25 No earlier than 30 days prior to the commencement of construction activities, a preconstruction survey shall be conducted by a qualified biologist to determine if active roosts of special-status bats are present on or within 300 feet of the Project disturbance boundaries. Should an active maternity roost be identified (the breeding season of native bat species in California generally occurs from April 1 through August 31), the roost shall not be disturbed and construction within 300 feet shall be postponed or halted, ~~at the discretion of the biological monitor,~~ until the roost is vacated and juveniles have fledged. Surveys shall include rocky outcrops, caves, structures, and large trees (particularly trees 12 inches in diameter or greater at 4.5 feet above grade with loose bark or other cavities). Trees and rocky outcrops shall be surveyed by a qualified bat biologist (*i.e.*, a biologist holding a CDFG collection permit and a Memorandum of Understanding with CDFG allowing the biologist to handle bats). If active maternity roosts or hibernacula are found, the rock outcrop or tree occupied by the roost shall be avoided (*i.e.*, not removed) by the Project. If avoidance of the maternity roost must occur, the bat biologist shall survey (through the use of radio telemetry or other CDFG approved methods) for nearby alternative maternity colony sites. If the bat biologist determines in consultation with and with the approval of CDFG that there are alternative roost sites used by the maternity colony and young are not present then no further action is required.

If a maternity roost will be impacted by the Project, and no alternative maternity roosts are in use near the site, substitute roosting habitat for the maternity colony shall be provided on, or in close proximity to, the Project site no less than three months prior to the eviction of the colony. Large concrete walls (*e.g.*, on bridges) on south or southwestern slopes that are retrofitted with slots and cavities are an example of structures that may provide alternative potential roosting habitat appropriate for maternity colonies. Alternative roost sites must be of comparable size and proximal in location to the impacted colony. CDFG shall also be notified of any hibernacula or active nurseries within the construction zone.

If non-breeding bat hibernacula are found in trees scheduled to be removed or in crevices in rock outcrops within the grading footprint, the individuals shall be safely evicted, under the direction of a qualified bat biologist, by opening the roosting area to allow airflow through the cavity or other means determined appropriate by the bat biologist (*e.g.*, installation of one-way doors). In situations requiring one-way doors, a minimum of one week shall pass after doors are installed and temperatures should be sufficiently warm for bats to exit the roost because bats do not typically leave their roost daily during winter months in southern coastal California. This action should allow all bats to leave during the course of one week. Roosts that need to be removed in situations where the use of one-way doors is not necessary in the judgment of the qualified bat biologist in consultation with CDFG shall first be disturbed by various means at the direction of the bat biologist at dusk to allow bats to escape during the darker hours, and the roost tree shall be removed or the grading shall occur the next day (*i.e.*, there shall be no less or more than one night between initial disturbance and the grading or tree removal). These actions should allow bats to leave during nighttime hours, thus increasing their chance of finding new roosts with a minimum of potential predation during daylight.

If an active maternity roost is located on the Project site, and alternative roosting habitat is available, the demolition of the roost site must commence before maternity colonies form (*i.e.*, prior to March 1) or after young are flying (*i.e.*, after July 31) using the exclusion techniques described above.

- LV 4.4-26 Any common or special-status species bat day roost sites found by a qualified biologist during pre-construction surveys conducted per LV 4.4-25, to be directly (within project disturbance footprint) or indirectly (within 300 feet of project disturbance footprint) impacted are to be mitigated with creation of artificial roost sites. The Project applicant shall establish (an) alternative roost site(s) within suitable preserved open space located at an adequate distance from sources of human disturbance.
- LV 4.4-27 The Project applicant will retain a qualified biologist to develop an Exotic Wildlife Species Control Plan and implement a control program for bullfrog, African clawed frog, and crayfish. The program will require the control of these species during construction within the River corridor and modified tributaries (bridges, diversions, bank stabilization, drop structures). The Plan shall include a description of the species targeted for eradication, the methods of harvest that will be employed, the disposal methods, and the measures that would be employed to avoid impacts to sensitive wildlife (*e.g.*, stickleback, arroyo toad, nesting birds) during removal activities (*i.e.*, timing, avoidance of specific areas). Annual monitoring shall occur for the first five years after construction of Project facilities. Monitoring will be conducted within sentinel locations along the River Corridor SMA/SEA 23 and where the Project provides potential habitat for these species (*e.g.*, future ponds and water features). Control shall be conducted within Project facilities where monitoring results indicate that exotic species have colonized an area. After the first five years, a Natural Lands Management Organization (NLMO) will conduct monitoring and control exotic species in perpetuity.
- LV 4.4-28 In order to reduce impacts to biological resources from grading and construction activities, all related activities will be conducted to facilitate the escape of animals to natural areas.

Construction and grading activities will begin in disturbed areas in order to avoid stranding animals in isolated patches of vegetation. Trenches will be covered at night to prevent animals from falling into and being trapped in trenches.

LV 4.4-29 ~~The permanent removal of riparian vegetation communities (including arrow weed scrub, cottonwood-willow riparian forest, Mexican elderberry scrub, coastal and valley freshwater marsh, big sagebrush scrub, mulefat scrub, southern coast live oak riparian forest, southern willow scrub, and river wash) shall be replaced by creating riparian vegetation communities of similar functions and services (see LV 4.4 31), or as allowed under LV 4.4 38 in accordance with the criteria set for the in LV 4.4 1. The permanent removal of CDFG jurisdictional riparian habitats in the river and tributaries shall be replaced by creating riparian habitats of similar functions and values (see LV 4.4 31 on the Project site, or as allowed under LV 4.4 37. Riparian habitat meeting success criteria (see LV 4.4 34) two years in advance of the removal or riparian habitat cannot meet the success criteria two years in advance of the project, the ratios listed below in Table 4.4 12 will apply. The permanent removal of CDFG jurisdictional riparian vegetation communities (including arrow weed scrub, cottonwood-willow riparian forest, Mexican elderberry scrub, coastal and valley freshwater marsh, big sagebrush scrub, mulefat scrub, southern coast live oak riparian forest, southern willow scrub, and river wash) habitats in the river and tributaries shall be replaced by creating riparian habitats (at a ratio of 1:1) of similar functions and values (see LV 4.4-31 on the Project site, or as allowed under LV 4.4-37. Riparian habitat meeting success criteria (see LV 4.4-34) two years in advance of the removal or riparian habitat cannot meet the success criteria two years in advance of the project, the ratios listed below in Table 4.4-12 will apply.~~

Table 4.4-12
CDFG Jurisdictional Permanent Impacts Mitigation Ratios

Ratios Listed by Vegetation Types & Quality				
Vegetation Community	Veg Code / ID	HIGH Reach	MEDIUM Reach	LOW Reach
		Value* (Mit. Ratio)	Value** (Mit. Ratio)	Value*** (Mit. Ratio)
Southern Cottonwood-Willow Riparian Forrest	SCWRF	4:1	3:1	2:1
Southern Willow Scrub	SWS	3:1	2.5:1	2:1
Oak Woodland (Coast Live, Valley)	CLOW / VOW	3:1	2.5:1	2:1
Big Sagebrush Scrub	BSS	2.5:1	2:1	1.5:1
Mexican Elderberry Scrub	MES	2.5:1	2:1	1.5:1
Cismontane Alkaline Marsh	CAM	2.5:1	2:1	1.5:1
Coastal and Valley Fresh Water Marsh	CFWM	2:1	1.5:1	1:1
Mulefat Scrub	MFS	2:1	1.5:1	1.25:1
Arrowweed Scrub	AWS	2:1	1.5:1	1:1
California Sagebrush scrub, and CSB-dominated habitats	CSB, CSB-A, -BS, -CB, -CHP, and -PS	2:1	1.5:1	1:1

Ratios Listed by Vegetation Types & Quality				
Vegetation Community	Veg Code / ID	HIGH Reach	MEDIUM Reach	LOW Reach
		Value* (Mit. Ratio)	Value** (Mit. Ratio)	Value*** (Mit. Ratio)
Herbaceous Wetland	HW	1.5:1	1.25:1	1:1
River Wash, emergent veg.	RW	1.5:1	1.25:1	1:1
Chaparral, Chamise Chaparral	CHP, CC	1.5:1	1.25:1	1:1
Coyote Brush Scrub	CYS	1.5:1	1.25:1	1:1
Eriodictyon Scrub	EDS	1.5:1	1.25:1	1:1
California Grass Lands	CGL	1:1	1:1	1:1
Agricultural / Disturbed / Developed	AGR / DL / DEV	1:1	1:1	1:1

Notes:

* HIGH reach value indicates a portion of the Santa Clara River or main tributary that scored above 0.79 Total Score utilizing the HARC methodology described in **Section 4.2, Geomorphology and Riparian Resources**, of the Draft EIS/EIR.

** MEDIUM reach value indicates a portion of the Santa Clara River or main tributary that scored between 0.4 and 0.79 Total Score utilizing the HARC methodology described in **Section 4.2**.

*** LOW reach value indicates a portion of the Santa Clara River or main tributary that scored below 0.4 Total Score utilizing the HARC methodology described in **Section 4.2**.

Ratios for Permanent Impacts to all classifications: Mitigation initiated two years prior to disturbance: 1:1 ratio; mitigation initiated less than two years after disturbance shall follow ratios in table above; mitigation initiated two to five years after disturbance shall add 0.5 to each value in the table above; and over five years, 1.0 is added to each value in the table above. (For example, initiation of mitigation of mulefat scrub three years after disturbance for a high habitat impact would be a ratio of 2.5:1, instead of 2:1 if initiated within two years of disturbance or 3:1 if initiated more than five years after disturbance.)

Ratios for Temporary Impacts to all classifications: Disturbance period less than two years, 1:1; two to five years, 1.5:1; over five years, 2:1, except for removal of southern cottonwood and oak woodlands, which shall be mitigated at 2:1 for High, 1.5:1 for Medium, and 1:1 for Low for all periods (except for pre-mitigated, which is 1:1).

Exotic/Invasive Species Removal, followed by restoration/revegetation, may be used to offset impacts above. Mitigation shall be credited at an acreage equivalent to the percentage of exotic vegetation at the restoration site. This means, for example, if a 10-acre area is occupied by 10% exotic species, restoration will be credited for 1 acre of impact. As appropriate and authorized by CDFG, reduced percentage credits may be applied for invasive removal with passive restoration (weeding and documentation of natural recruitment only).

LV 4.4-30 Creation of new vegetation communities and restoration of impacted vegetation communities shall occur at suitable sites in or adjacent to ~~the watercourses jurisdictional areas~~ or in areas where bank stabilization would occur. Locations where the excavation of uplands for bank protection/stabilization results in creation of new, unvegetated riverbed or other disturbance shall receive the highest level of priority for vegetation community restoration. ~~The highest priority vegetation community restoration sites are to be new riverbed and tributary areas created, or disturbed sites impacted, during the excavation of uplands for bank protection/stabilization activities.~~ Restoration sites may also occur at locations outside the riverbed where there are appropriate hydrologic conditions to create a self-sustaining riparian vegetation community and where upland and riparian vegetation community values are absent or very low. All sites shall contain suitable hydrological conditions and surrounding land uses to ensure a self-sustaining functioning riparian vegetation community. Candidate restoration sites shall be described in the annual mitigation status report (LV 4.4-41). Sites will be approved when the detailed wetlands mitigation plans are submitted to the Corps and CDFG as part of the sub-notification letters submitted for individual projects. Status of the sites will be addressed as part of the annual

mitigation status report and mitigation accounting form agency review. Each ~~mitigation~~ revegetation plan will include acreages, maps and site specific descriptions of the proposed revegetation site, including analysis of soils, hydrologic suitability, and present and future adjacent land uses.

- LV 4.4-31 Replacement vegetation communities shall be designed to replace the functions and values of the vegetation communities being removed. The replacement vegetation communities shall have similar dominant trees and understory shrubs and herbs (excluding exotic species) to those of the affected vegetation communities (see Table 4.4-13 for example of recommended plant species for the River Corridor SMA/SEA 23 and tributaries). In addition, the replacement vegetation communities shall be designed to replicate the density and structure of the affected vegetation communities once the replacement vegetation communities have met the mitigation success criteria.

Table 4.4-13
Potential Plant Species for Vegetation Community Restoration in
the River Corridor SMA/SEA 23 and Tributaries

Trees	
red willow	<i>Salix laevigata</i>
arroyo willow	<i>Salix lasiolepis</i>
Fremont cottonwood	<i>Populus fremontii</i>
black cottonwood	<i>Populus balsamifera</i> ssp. <i>trichocarpa</i>
western sycamore	<i>Platanus racemosa</i>
Shrubs	
mulefat	<i>Baccharis salicifolia</i>
sandbar willow	<i>Salix exigua</i>
arrow weed	<i>Pluchea sericea</i>
Herbs	
mugwort	<i>Artemisia douglasiana</i>
western ragweed	<i>Ambrosia psilostachya</i>
cattail	<i>Typha latifolia</i>
bulrush	<i>Scirpus americanus</i>
prairie bulrush	<i>Scirpus maritimus</i>

Note: This is a recommended list. Other species may be found suitable based on site conditions and state and federal permits.

- LV 4.4-32 Average plant spacing shall be determined based on an analysis of vegetation communities to be replaced. The applicant shall develop plant spacing specifications for all riparian vegetation communities to be restored. Plant spacing specifications shall be reviewed and approved by the Corps and CDFG when restoration plans are submitted to the agencies as part of the sub-notification letters submitted to the Corps and CDFG for individual projects or as part of the annual mitigation status report and mitigation accounting form.

- LV 4.4-33 If at any time prior to Agency approval of the restoration area, the site is subject to an act of God (flood, fires, or drought), the applicant shall be responsible for replanting the damaged area. The site will be subject to the same success criteria as provided for LV 4.4-34. Should a second act of God occur prior to Agency approval of the restoration area, the applicant shall coordinate with the Agencies to develop an alternative restoration strategy(ies) to meet success requirements. This may include restoration elsewhere in the River corridor or tributaries.
- LV 4.4-34 The revegetation site will be considered "complete" upon meeting all of the following success criteria. In a sub-notification letter, the applicant may request modification of success criteria on a project by project basis. Acceptance of such request will be at the discretion of CDFG and the Corps.
1. Regardless of the date of initial planting, any restoration site must have been without active manipulation by irrigation, planting, or seeding for a minimum of three years prior to Agency consideration of successful completion.
 2. The percent cover and species richness of native vegetation shall be evaluated based on local reference sites established by CDFG and the Corps for the plant communities in the impacted areas.
 3. Native shrubs and trees shall have at least 80 percent survivorship after two years beyond the beginning of the success evaluation start date. This may include natural recruitment.
 4. Non-native species cover will be no more than 5 percent absolute cover through the term of the restoration.
 5. Giant reed (*Arundo donax*), tamarisk (*Tamarix ramosissima*), perennial pepperweed (*Lepidium latifolium*), tree of heaven (*Ailanthus altissimus*), pampas grass (*Cortaderia selloana*) and any species listed on the California State Agricultural list, or Cal-IPC list of noxious weeds will not be present on the revegetation site as of the date of completion approval.
 6. Using the HARC assessment methodology, the compensatory mitigation site shall meet or exceed the baseline functional scores of the impact area in Corps' jurisdictional waters, as described in the Compensatory Mitigation Plan²³ for Waters of the United States. ~~If the compensatory mitigation site cannot meet or exceed the baseline functional score of the impact area in jurisdictional waters of the United States, additional mitigation area would be required to compensate for the functional loss.~~
- LV 4.4-35 Temporary irrigation shall be installed as necessary for plant establishment. Irrigation shall continue as needed until the restoration site becomes self sustaining regarding survivorship and growth. Irrigation shall be terminated in the fall to provide the least stress to plants.
- LV 4.4-36 ~~As an alternative to the creation/restoration of vegetation communities to compensate for permanent removal of riparian vegetation communities, in the Santa Clara River, the applicant may control In areas where invasive exotic plant species control is authorized by CDFG within the Upper Santa Clara River Sub Watershed for a portion of the Santa Clara River mitigation required under LV 4.4-29. The applicant may perform this work or contribute "in-lieu of other riparian habitat mitigation (LV 4.4-29), fees" to the Upper Santa Clara River Arundo/Tamarisk Removal Program to perform this work, if available. The weed control sites shall be selected in a coordinated, logical manner to ensure that giant reed and other invasive weeds are controlled to improve and expand wildlife and endangered~~

²³ For detailed information concerning the Corps compensatory mitigation program for impacts to waters of the United States, please reference the Corp's Record of Decision (August 2011) and the Section 404(b)1 Alternatives Analysis, included in the Final EIS/EIR for the Newhall Ranch RMDP/SCP project.

~~species habitat; reduce flooding, erosion, and fire hazards; improve water quality; and potentially increase stream flow/water quantity in the project watercourses. Removal areas shall be kept free of exotic plant species for 5 years after initial treatment. In areas where extensive exotic removal occurs, revegetation with native plants or natural recruitment shall be documented.~~

- LV 4.4-37 The exotics control program may utilize methods and procedures in accordance with the provisions in the Upper Santa Clara River Watershed Arundo/Tamarisk Removal Plan Final Environmental Impact Report, dated February 2006, or the applicant may propose alternative methods and procedures for Corps and CDFG review and approval pursuant to a sub-notification letter or annual mitigation status report submittal. Exotic plant species control will be credited at an acreage equivalent to the percentage of exotic vegetation at the restoration site. For example: a 10-acre site occupied by 10% exotic species will be credited with one acre of mitigation when placed under the exotics control program. Exotic plant species control will be credited for 1 acre of mitigation.
- LV 4.4-38 All native riparian trees with a 3-inch diameter at breast height (dbh) or greater in temporary construction areas shall be replaced using 1- or 5-gallon container plants, containered trees, or pole cuttings in the temporary construction areas in the winter following the construction disturbance. The growth and survival of the replacement trees shall meet the performance standards specified in LV 4.4-34. In addition, the growth and survival of the planted trees shall be monitored until they meet the self-sustaining success criteria in accordance with the methods and reporting procedures specified in LV 4.4-34, LV 4.4-40, and LV 4.4-41.
- LV 4.4-39 Vegetation communities temporarily impacted by the proposed project shall be revegetated as described in LV 4.4-29. Large trunks of removed trees may also remain on site to provide habitat for invertebrates, reptiles, and small mammals or may be anchored within the project site for erosion control. To facilitate restoration, mulch, or native topsoil (the top 6- to 12-inch deep layer containing organic material), may be salvaged from the work area prior to construction. Following construction, salvaged topsoil shall be returned to the work area and placed in the restoration site. Within one year, the project biologist will evaluate the progress of restoration activities in the temporary impact areas to determine if natural recruitment has been sufficient for the site to reach performance goals. In the event that native plant recruitment is determined by the project biologist to be inadequate for successful habitat establishment, the site shall be revegetated in accordance with the methods designed for permanent impacts (i.e., seeding, container plants, and/or a temporary irrigation system may be recommended). This will help ensure the success of temporary mitigation areas. The applicant shall restore the temporary construction area per the success criteria and ratios described in LV 4.4-1, LV 4.4-29, and LV 4.4-34. Annual monitoring reports on the status of the recovery of temporarily impacted areas shall be submitted to the Corps and CDFG as part of the annual mitigation status report (LV 4.4-40 and LV 4.4-41).
- LV 4.4-40 To provide an accurate and reliable accounting system for mitigation, the applicant shall file a mitigation accounting form annually with the Corps and CDFG by April 1.
- LV 4.4-41 An annual mitigation status report shall be submitted to the Corps and CDFG by April 1 of each year until satisfaction of success criteria identified in LV 4.4-34. This report shall include any required plans for plant spacing, locations of candidate restoration and weed control sites or proposed "in-lieu fees," restoration methods, and vegetation community restoration performance standards. For active vegetation community creation sites, the report shall include the survival, percent cover, and height of planted species; the number by species of plants replaced; an overview of the revegetation effort and its success in meeting performance criteria; the method used to assess these parameters; and photographs. For active exotics control sites, the report shall include an assessment of weed control; a description of the relative cover of native vegetation, bare areas, and exotic vegetation; an accounting of colonization by native plants; and photographs. The report shall also include

the mitigation accounting form (see LV 4.4-40), which outlines accounting information related to species planted or exotics control and mitigation credit remaining. The annual mitigation and monitoring report shall document the current functional capacity of the compensatory mitigation site using the HARC assessment methodology, as well as documenting the baseline functional scores of the impact site in jurisdictional waters of the United States.

- LV 4.4-42 ~~Prior to the construction of adjacent developments, signs will be placed along the roads indicating potential wildlife crossings where mountain lions and mule deer are known to cross in consultation with CDFG. Road undercrossings will be built in accordance with accepted design criteria to allow the passage of mountain lions and mule deer. The applicant shall prepare a Wildlife Movement Corridor Plan that specifically addresses wildlife movement corridors at San Martinez Grande, Chiquito Canyon, and Castaic Creek, which shall be monitored for one year prior to construction of the SR-126 widenings. The Plan shall address current movement that is occurring, the methods that will be implemented to provide for passage, including lighting, fencing, vegetation planting, the installation of bubblers to encourage wildlife usage, and the size of the passage. The applicant shall install motion cameras at these locations in consultation with CDFG and monitor these passages for a period of two years subsequent to constructing improvements. A report of the wildlife documented to utilize these crossings shall be provided to CDFG annually. In addition, the Salt Creek crossing west of the Project area will be enhanced prior to initiation of construction in Long Canyon (southern portion of the Homestead Village). This crossing will be monitored for one year at the initiation of RMDP development, for two years at the time the crossing is enhanced, and then for three years after Project build-out. Prior to the construction of adjacent developments, signs will be placed along the roads indicating potential wildlife crossings where mountain lions and mule deer are likely to cross. (This mitigation measure has been identified to offset cumulative impacts to wildlife habitat (including coastal scrub). Implementation of the measure is linked directly to construction activities related to the widening of SR-126 and/or the southern portion of the Homestead Village area, but is not required for implementation with the Landmark Village tract map.)~~
- LV 4.4-43 Development areas shall have dust control measures implemented and maintained to prevent dust from impacting vegetation communities and special-status plant and aquatic wildlife species. Dust control shall comply with SCAQMD Rule 403d (SCAQMD 2005). Where construction activities occur within 100 feet of known special-status plant species locations, chemical dust suppression shall not be utilized. Where determined necessary by a qualified biologist, a screening fence (*i.e.*, a six-foot-high chain link fence with green fabric up to a height of 5 feet) shall be installed to protect special-status species locations.
- LV 4.4-44 Plant palettes proposed for use on landscaped slopes, street medians, park sites, and other public landscaped and FMZ areas within ~~100~~200 feet of native vegetation communities shall be reviewed by a qualified restoration specialist to ensure that the proposed landscape plants will not naturalize and require maintenance or cause vegetation community degradation in the open space areas (River Corridor SMA/SEA 23, High Country SMA/SEA 20, Salt Creek area, and natural portions of the Open Area). Container plants to be installed within public areas within 200 feet of the open space areas shall be inspected by a qualified restoration specialist for the presence of disease, weeds, and pests, including Argentine ants. Plants with pests, weeds, or diseases shall be rejected. In addition, landscape plants within ~~100~~200 feet of native vegetation communities shall not be on the Cal-IPC California Invasive Plant Inventory (most recent version) or on the list of Invasive Ornamental Plants listed in Appendix B of the SCP. The current Cal-IPC list can be obtained from the Cal-IPC website (<http://www.cal-ipc.org/ip/inventory/index.php>). Landscape plans will include a plant palette composed of native or non-native, non-invasive species that do not require high irrigation rates. Except as required for fuel modification, irrigation of perimeter landscaping shall be limited to temporary irrigation (*i.e.*, until plants become established).

- LV 4.4-45 Waste and recycling receptacles that discourage foraging by wildlife species adapted to urban environments shall be installed in common areas and parks throughout the Landmark Village site.
- LV 4.4-46 An Integrated Pest Management (IPM) plan that addresses the use of pesticides (including rodenticides and insecticides) on site will be prepared prior to the issuance of building permits for the initial tract map. The IPM will implement appropriate Best Management Practices to avoid and minimize adverse effects on the natural environment, including vegetation communities, special-status species, species without special status, and associated habitats, including prey and food resources (e.g., insects, small mammals, seeds). Potential management practices include cultural (e.g., planting pest-free stock plants), mechanical (e.g., weeding, trapping), and biological controls (e.g., natural predators or competitors of pest species, insect growth regulators, natural pheromones, or biopesticides), and the judicious use of chemical controls, as appropriate (e.g., targeted spraying versus broadcast applications). The IPM will establish management thresholds (i.e., not all incidences of a pest require management); prescribe monitoring to determine when management thresholds have been exceeded; and identify the most appropriate and efficient control method that avoids and minimizes risks to natural resources. Preparation of the covenants, conditions, and restrictions (CC&Rs) for each tract map shall include language that prohibits the use of anticoagulant rodenticides in the Project site.
- LV 4.4-47 The Natural Lands Management Organization (NLMO) shall fund or otherwise coordinate the regular removal of trash and debris from riparian habitats on or adjacent to the project site. The removal of trash shall be conducted in a manner as to not disturb sensitive habitats.
- LV 4.4-48 Each tract map Home Owners' Association shall supply educational information to future residents regarding pets, wildlife, and open space areas. The material shall discuss the presence of native animals (e.g., coyote, bobcat, mountain lion), indicate that those native animals could prey on pets, indicate that no actions shall be taken against native animals should they prey on pets allowed outdoors, and indicate that pets must be leashed while using the designated trail system and/or in any areas within or adjacent to open space. Control of stray and feral cats and dogs will be conducted in open space areas on an as-needed basis by the NLMO(s) or the Newhall Ranch JPA managing the River Corridor SMA/SEA 23, High Country SMA/SEA 20, or Salt Creek area or by the HOAs managing the Open Areas. Feral cats and dogs may be trapped and deposited with the local Society for the Prevention of Cruelty to Animals or the Los Angeles County Department of Animal Control.
- LV 4.4-49 Permanent fencing shall be installed along all River Corridor SMA/SEA 23 trails adjacent to the Santa Clara River, or other sensitive resources, in order to minimize impacts associated with increased human presence on protected vegetation communities and special-status plant and wildlife species. The fencing will be split rail to avoid inhibiting wildlife movement. Viewing platforms will be located in land covers currently mapped as agriculture, disturbed land, or developed land.
- LV 4.4-50 A cowbird trapping program shall be implemented once vegetation clearing begins and maintained throughout the construction, maintenance, and monitoring period of the riparian restoration sites. A minimum of five traps shall be utilized, with at least one trap adjacent to the project site and one or two traps located at feeding areas or other CDFG-approved location. The trapping contractor may consult with CDFG to request modification of the trap location(s). CDFG must approve any relocation of the traps. Traps will be maintained beginning each year on April 1 and concluding on/about November 1 (may conclude earlier, depending upon weather conditions and results of capture). The trapping contractor may also consult CDFG on a modified, CDFG-approved trapping schedule modification. The applicant shall follow CDFG and USFWS protocol. In the event that trapping is terminated after the first few years, subsequent phases of the RMDP development will require initiation of trapping surveys to determine whether re-establishment of the trapping program is necessary.

- LV 4.4-51 Upon initiating landscaping within~~Following the completion and occupancy of a~~ development area, quarterly monitoring shall be initiated for Argentine ants along the urban–open space interface at sentinel locations where invasions could occur (e.g., where moist microhabitats that attract Argentine ants may be created). A qualified biologist shall determine the monitoring locations. Ant pitfall traps will be placed in these sentinel locations and operated on a quarterly basis to detect invasion by Argentine ants. If Argentine ants are detected during monitoring, direct control measures will be implemented immediately to help prevent the invasion from worsening. These direct controls may include but are not limited to nest/mound insecticide treatment, or available natural control methods being developed. A general reconnaissance of the infested area would also be conducted to identify and correct the possible source of the invasion, such as uncontrolled urban runoff, leaking pipes, or collected water. Monitoring and control of Argentine ants would occur for a five-year period. After the first 5 years, the NLMO or other entity will be responsible for controlling Argentine ants.
- LV 4.4-52 Thirty days prior to construction activities, a qualified biologist shall conduct a preconstruction survey for ringtail. The survey area shall include suitable riparian and woodland habitat (southern coast live oak riparian forest, southern cottonwood–willow riparian forest, southern willow scrub, coast live oak woodland, valley oak woodland, and mixed oak woodland) within the construction disturbance zone and a 300-foot buffer around the construction site. Should the ringtail be observed in the breeding and rearing period of February 1 through August 31, no construction-related activities shall occur within 300 feet of the occupied area for the period of February 1 through August 31 or until the ringtail has been determined by a qualified biologist (in consultation with CDFG) to no longer occupy areas within 300 feet of the construction zone and/or that construction activities would not adversely affect the successful rearing of young. If the ringtail is observed within the construction disturbance zone or in the 300-foot buffer around the construction site in the nonbreeding/rearing period of September 1 through January 31, and avoidance is not possible, denning ringtail shall be safely evicted under the direction of a qualified biologist (as determined by a Memorandum of Understanding with CDFG). All activities that involve the ringtail shall be documented and reported to CDFG.
- LV 4.4-53 Any southern California black walnut and mainland cherry trees or shrubs outside riparian areas greater than one inch dbh shall be replaced in the ratio of at least 2:1. Multi-trunk trees/shrub dbh shall be calculated based on combined trunk dbh. Mitigation shall be deemed complete when each replacement tree attains at least one inch in diameter one foot above the base.
- LV 4.4-54 During any stream diversion or culvert installation activity, a qualified biologist(s) shall be present and shall patrol the areas within, upstream, and downstream of the work area. The biologists shall inspect the diversion and inspect for stranded fish or other aquatic organisms. Under no circumstances shall the unarmored threespine stickleback be collected or relocated, unless USFWS personnel or their agents implement this measure. Any event involving stranded fish shall be recorded and reported to CDFG and USFWS within 24 hours.
- LV 4.4-55 Conduct focused surveys for California red-legged frogs. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities, all construction sites and access roads within the riverbed as well as all riverbed areas within 1,000 feet of construction sites and access roads shall be surveyed at the appropriate season for California red-legged frogs. The applicant shall contract with a qualified biologist to conduct focused surveys for California red-legged frogs. If detected in or adjacent to the Project area, no work will be authorized within 500 feet of occupied habitat until the applicant provides concurrence from the USFWS to CDFG and Corps. If present, the applicant shall implement measures required by the

6. The authorized biologist will direct the installation of the fence and conduct a minimum of three nocturnal surveys to move any California red-legged frogs from within the fenced area to suitable habitat outside of the fence. If California red-legged frogs are observed on the final survey or during subsequent checks, the authorized biologist will conduct additional nocturnal surveys if he or she determines that they are necessary in concurrence with the USFWS/CDFG.
7. Fencing to exclude California red-legged frogs will be at least 24 inches in height.
8. The type of fencing must be approved by the authorized biologist and the USFWS/CDFG.
9. Construction activities that may occur immediately adjacent to breeding pools or other areas where large numbers of California red-legged frogs may congregate will be conducted during times of the year (fall/winter) when individuals have dispersed from these areas. The authorized biologist will assist the applicant in scheduling its work activities accordingly.
10. If California red-legged frogs are found within an area that has been fenced to exclude California red-legged frogs, activities will cease until the authorized biologist moves the California red-legged frog(s).
11. If California red-legged frogs are found in a construction area where fencing was deemed unnecessary, work will cease until the authorized biologist moves the California red-legged frogs. The authorized biologist in consultation with USFWS/CDFG will then determine whether additional surveys or fencing are needed. Work may resume while this determination is being made, if deemed appropriate by the authorized biologist and USFWS.
12. Any California red-legged frogs found during clearance surveys or otherwise removed from work areas will be placed in nearby suitable, undisturbed habitat. The authorized biologist will determine the best location for their release, based on the condition of the vegetation, access to deep perennial pools, soil, and other habitat features and the proximity to human activities. Clearance surveys shall occur on a daily basis in the work area.
13. The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed.
14. Staging areas for all construction activities will be located on previously disturbed upland areas, if possible, designated for this purpose. All staging areas will be fenced.
15. To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force (DAPTF 2009) will be followed at all times.

LV 4.4-56 Bridge and culvert designs, where practicable, shall provide roosting habitat for bats. A qualified biologist shall work with the project engineer in identifying and incorporating structures into the design that provide suitable roosting habitat for bat species occurring in the project area. The final design of the roosting structures would be chosen in consultation with CDFG.

LV 4.4-57 The 1,518-acre Salt Creek area shall be offered for dedication to the public pursuant to Condition 42 of the approved Specific Plan using a "rough step" land dedication approach. Irrevocable offers of dedication will be provided to CDFG for identified impact offsets in accordance with the Plan (LV 4.4-1). The Salt Creek area includes approximately 629 acres of coastal scrub communities within both Ventura and Los Angeles counties. This land dedication shall be managed in conjunction with the 4,205-acre High Country SMA (containing 1,314 acres of coastal scrub communities).

- a. To facilitate wildlife movement between the north side of SR-126 and the Salt Creek area, enhancements will be made to the existing agricultural undercrossing and to the agricultural land at the base of Salt Creek as discussed in LV 4.4-42. A Wildlife Movement Enhancement Plan shall be submitted to the Corps and CDFG for approval prior to implementation. The plan shall include at the minimum the following:
 - i. A portion of the agricultural field on the north side of SR-126 will be dedicated to wildlife movement. Trees and/or scrubs will be planted in the agricultural field to guide wildlife into the existing undercrossing.
 - ii. On the south side of SR-126 two rows of trees/scrubs will be planted to guide wildlife to the Santa Clara River.
 - iii. A wildlife corridor will be created through the agricultural fields at the base of Salt Creek Canyon.

(The second part of this mitigation measure (a.i. through a.iii.) has been identified to offset cumulative impacts to wildlife habitat, including coastal scrub). Implementation of the measure is linked directly to construction activities related to the widening of SR-126 and/or the southern portion of the Homestead Village area but is not required for implementation with the Mission Village tract map.)

LV 4.4-58 The Newhall Ranch JPA will have overall responsibility for recreation within and conservation of the High Country. The Newhall Ranch JPA and NLMO shall develop and implement a conservation education and citizen awareness program for the High Country SMA informing the public of the special-status resources present within the High Country SMA and providing information on common threats posed by the presence of people and pets to those resources. The NLMO shall install trailhead and trail signage indicating the High Country SMA is a biological conservation area and advising that people and their animals must stay on existing trails at all times and that violators may be cited. The NLMO shall provide quarterly maintenance patrols to remove litter and monitor trail expansion and fire hazards within the High Country SMA, funded by the JPA.

LV 4.4-59 Supplemental restoration of coastal scrub shall be conducted as an adaptive management measure pursuant to LV 4.4-2. Eight areas were identified in the Draft Newhall Ranch Mitigation Feasibility Report in the High Country SMA, Salt Creek area, and River Corridor SMA (Dudek 2007A) for coastal scrub restoration. In the event that coastal scrub restoration is required pursuant to LV 4.4-2, the applicant shall develop a Coastal Scrub Restoration Plan, subject to the approval of CDFG. The plan shall specify, at a minimum, the following:

(1) the location of mitigation sites to be selected from suitable mitigation land in the High Country and Salt Creek areas identified in the Feasibility Study; (2) a description of "target" vegetation (native shrubland) to include estimated cover and abundance of native shrubs; (3) site preparation measures to include topsoil treatment, soil decompaction, erosion control, temporary irrigation systems, or other measures as appropriate; (4) methods for the removal of non-native plants (e.g., mowing, weeding, raking, herbicide application, or burning); (5) the source of all plant propagules (e.g., seed, potted nursery stock, etc. collected from within five miles of the restoration site), the quantity and species of seed or potted stock of all plants to be introduced or planted into the restoration/enhancement areas; (6) a schedule and action plan to maintain and monitor the enhancement/restoration areas, to include at minimum, qualitative annual monitoring for revegetation success and site degradation due to erosion, trespass, or animal damage for a period no less than two years; (7) as needed where sites are near trails or other access points, measures such as fencing, signage, or security patrols to exclude unauthorized entry into the restoration/enhancement areas; and (8) contingency measures such as replanting, weed control, or erosion control to be implemented if habitat improvement/restoration efforts are not successful.

Habitat restoration/enhancement will be judged successful when: (1) percent cover and species richness of native species reach 50% of cover and species richness at reference sites; and (2) the replacement vegetation has persisted at least one summer without irrigation.

Annual monitoring reports will be prepared and submitted to CDFG and will be made available to the public to guide future mitigation planning. Monitoring reports will describe all restoration/enhancement measures taken in the preceding year; describe success and completion of those efforts and other pertinent site conditions (erosion, trespass, animal damage) in qualitative terms; and describe vegetation survival or establishment in quantitative terms.

LV 4.4-60 Bridges over the Santa Clara River shall be designed to minimize impacts to natural areas and riparian resources from associated lighting and stormwater runoff. All lighting will be designed to be directed away from natural areas (pursuant to SP-4.6-56) using shielded lights, low sodium-vapor lights, bollard lights, or other available light and glare minimization methods. Bridges will be designed to minimize normal vehicular lighting from trespassing into natural areas using side walls a minimum of 24 inches high. All stormwater from the bridges will be directed to water treatment facilities for water quality treatment.

LV 4.4-61 a. As a supplement to LV 4.4-1, LV 4.4-15, and LV 4.4-29 through LV 4.4-41, additional habitat mitigation through replacement or enhancement of nesting/foraging habitat for least Bell's vireo will be provided for certain key habitat zones at higher ratios (identified as "key population areas" in **Figure 4.5-86, Alternative 2 Impacts to Least Bell's Vireo Habitat**²⁴). Southern willow scrub, southern cottonwood–willow riparian, arrow weed scrub, mulefat scrub, and Mexican elderberry scrub and woodland that provide nesting/foraging habitat for least Bell's vireo in "key population areas" shall be replaced or enhanced. All permanent loss to nesting/foraging habitat in key population areas shall be mitigated at a 5:1 ratio unless

²⁴ The figure is included in the Final EIS/EIR, available for public review at CDFG's website: <http://www.dfg.ca.gov/regions/5/newhall/docs/>

otherwise authorized by CDFG or USFWS. Temporary habitat loss of foraging/nesting habitat in key population areas shall be mitigated at a 2:1 ratio. The requirements for replacing habitat by either creating new habitat or removing exotic species from existing habitat shall follow the procedures outlined in LV 4.4-1, LV 4.4-15, and LV 4.4-29 through LV 4.4-41. To replace the lost functions of habitat located adjacent to the Santa Clara River due to noise impacts, all nesting/foraging habitat within the 60 dBA sound contour (associated with development site roadway improvements) shall be considered degraded. Nesting/foraging habitat within this area shall be mitigated at a ratio of 2:1.

b. The loss of documented occupied nesting habitat for coastal California gnatcatcher shall be mitigated. If the coastal California gnatcatcher is identified nesting on site, the applicant will acquire or preserve nesting coastal California gnatcatcher habitat at a 3:1 ratio for impacts to documented occupied habitat, or by the ratio specified in LV 4.4-29, whichever is greater. Mitigation acquisition shall occur at an agreed-upon location as approved by the USFWS upon consultation. The applicant shall enter into a binding legal agreement regarding the preservation of occupied habitat describing the terms of the acquisition, enhancement, and management of those lands.

LV 4.4-62 At least 1,900 acres of Open Area within the Specific Plan area shall be offered for dedication to an NLMO in fee and/or by conservation easement. These 1,900 acres of the Open Area will be left as natural vegetation. Dedication of open areas lands shall be reported annually to CDFG.

LV 4.4-63 The mitigation program shall incorporate applicable principles in the interagency Federal Guidance for the Establishment, Use, and Operation of Mitigation Banks (60 FR 58605–58614) to the extent feasible and appropriate, particularly the guidance on administration and accounting. Nothing in the section 404 or section 2081 Permit or section 1605 agreement shall preclude the applicant from selling mitigation credits to other parties wishing to use those permits or that agreement for a project and/or maintenance activity included in the permits/agreement.

LV 4.4-64 Construction plans shall include necessary design features and construction notes to ensure protection of vegetation communities and special-status plant and aquatic wildlife species adjacent to construction. In addition to applicable erosion control plans and performance under SCAQMD Rule 403d dust control (SCAQMD 2005), the Project stormwater pollution prevention plan (SWPPP) shall include the following minimum BMPs. Together, the implementation of these requirements shall ensure protection of adjacent habitats and wildlife species during construction. At a minimum, the following measures/restrictions shall be incorporated into the SWPPP, and noted on construction plans where appropriate, to avoid impacting special-status species during construction:

- Avoid planting or seeding invasive species in development areas within 200 feet of native vegetation communities.
- Provide location and details for any dust control fencing along Project boundaries (LV 4.4-43).

- Vehicles shall not be driven or equipment operated in areas of ponded or flowing water, or where wetland vegetation, riparian vegetation, or aquatic organisms may be destroyed, except as otherwise provided for in the 404 Permit or 1603 Agreement.
- Silt settling basins installed during the construction process shall be located away from areas of ponded or flowing water to prevent discolored, silt-bearing water from reaching areas of ponded or flowing water during normal flow regimes.
- If a stream channel has been altered during the construction and/or maintenance operations, its low flow channel shall be returned as nearly as practical to pre-Project topographic conditions without creating a possible future bank erosion problem or a flat, wide channel or sluice-like area. The gradient of the streambed shall be returned to pre-Project grade, to the extent practical, unless it represents a wetland restoration area.
- Temporary structures and associated materials not designed to withstand high seasonal flows shall be removed to areas above the high water mark before such flows occur.
- Staging/storage areas for construction equipment and materials shall be located outside of the ordinary high water mark.
- Any equipment or vehicles driven and/or operated within or adjacent to the stream shall be checked and maintained daily, to prevent leaks of materials that could be deleterious to aquatic life if introduced to water.
- Stationary equipment such as motors, pumps, generators, and welders which may be located within the riverbed construction zone shall be positioned over drip pans. No fuel storage tanks shall be allowed in the riverbed.
- No debris, bark, slash sawdust, rubbish, cement or concrete or washing thereof, oil, petroleum products, or other organic material from any construction, or associated activity of whatever nature, shall be allowed to enter into, or be placed where it may be washed by rainfall or runoff into, watercourses included in the permit. When construction operations are completed, any excess materials or debris shall be removed from the work area.
- No equipment maintenance shall be done within or near any stream where petroleum products or other pollutants from the equipment may enter these areas with stream flow.
- The operator shall install and use fully covered trash receptacles to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash.
- The operator shall not permit pets on or adjacent to the construction site.

No guns or other weapons are allowed on the construction site during construction, with the exception of the security personnel and only for security functions. No hunting shall be authorized/permitted during construction.

LV 4.4-65 The installation of new, or relocation of existing, utility poles and phone and cell towers shall be coordinated with CDFG where located in the High Country SMA and Salt Creek area. The applicant or SCE shall install utility poles, phone, and cell towers in conformance

with APLIC standards for collision-reducing techniques as outlined in Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006 (APLIC 2006).

- LV 4.4-66 a. All surfaces on new antennae and phone/utility towers shall be designed and operated with anti-perching devices in conformance with APLIC standards to deter California condors and other raptors from perching. During construction the area shall be kept clean of debris, such as cable, trash, and construction materials. The applicant shall collect all microtrash and litter (anything shiny, such as broken glass), vehicle fluids, and food waste from the Project area on a daily basis. Workers will be trained on the issue of microtrash: what constitutes microtrash, its potential effects on California condors, and how to avoid the deposition of microtrash.
- b. The applicant shall retain a qualified biologist with knowledge of California condors to monitor construction activities within the Project area. The resumes of the proposed biologist(s) will be provided to CDFG for concurrence. This biologist(s) will be referred to as the authorized biologist hereafter. During clearing and grubbing of construction areas, the qualified biologist shall be present at all times. During mass grading, construction sites shall be monitored on a daily basis. The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed. If condors are observed landing in the Project area, the applicant shall avoid further construction within 500 feet of the sighting until the animals have left the area, or as otherwise authorized by CDFG and USFWS. All condor sightings in the Project area will be reported to CDFG and USFWS within 24 hours of the sighting. Should condors be found roosting within 0.5 mile of the construction area, no construction activity shall occur between one hour before sunset to one hour after sunrise, or until the condors leave the area, or as otherwise directed by USFWS. Should condors be found nesting within 1.5 miles of the construction area, no construction activity will occur until further authorization occurs from CDFG and USFWS.
- c. To further protect California condor potentially foraging in the Project area over the long term from negative interactions with humans and/or artificial structures, the applicant or the IPA or the NLMO shall remove dead cattle that are found or reported within 1,000 feet of a residential or commercial development boundary. Dead cattle shall be relocated to a predetermined location within the High Country SMA or Salt Creek area. The locations where carcasses shall be placed shall be a minimum of 1,000 feet from a development area boundary. Appropriate locations for transfer of carcasses include open grasslands and oak/grassland areas where condors can readily detect carcasses and easily land and take off without encountering physical obstacles such as powerlines and other utility structures. The proposed locations would be selected and approved by the CDFG and USFWS. Pursuant to this measure, a telephone number for reporting dead cattle shall be provided and actively maintained. Any cattle carcasses transferred to the relocation areas shall be reported to the USFWS Condor group.

project-level mapping data for the RMDP/SCP project area, including Landmark Village project were incorporated into this analysis. According to land use information provided by Los Angeles County and Ventura County, and by the cities of Santa Clarita, Ventura, Santa Paula, and Fillmore, and the community of Piru, approximately 47,300 acres (4.6 percent) of the watershed had been developed per the GAP data (UCSB, 1999, Recirculated Draft EIR, **Appendix 4.4**). In addition, project list information from these government entities indicates that another 32,300 acres (3.1 percent) are expected to be developed in the foreseeable future, based on present and reasonably foreseeable future projects. Present and reasonably foreseeable future projects, including the proposed RMDP/SCP, including the Landmark Village project, would convert approximately 37,890 additional acres (3.6 percent) of the watershed to developed uses, resulting in a total of approximately 85,200 acres (8.2 percent) of watershed being developed.

From a specific vegetation community and land cover perspective, the impacts from such development (including the proposed RMDP/SCP project, which encompasses the Landmark Village project) is estimated to affect about 4.9 percent of existing California annual grassland, agriculture, and disturbed lands; 11.8 percent of existing coastal scrub communities, 2.3 percent of existing chaparral communities, and 4.2 percent of existing riparian communities within the watershed (although it is likely that there would be some level of avoidance of these riparian areas). Purple needlegrass grassland, of which 0.6 acre is mapped in the RMDP/SCP project area outside of the Landmark Village site, would not be removed as a result of grading activities, but would be at increased risk of non-native, invasive plant and animal species, litter, hydrological alterations, human disturbance, and modified fire frequency. At the broad scale and necessarily lower precision of the California GAP vegetation database (UCSB, 1999, Recirculated Draft EIR, **Appendix 4.4**), no oak woodlands or oak/grass vegetation communities were mapped outside of the RMDP/SCP project area within present and reasonably foreseeable development sites. The proposed RMDP/SCP project, however, would result in the loss of 95 acres of oak woodlands and oak/grass, including 32.4 acres within the proposed Landmark Village project site (see **Table 4.4-9**). It is anticipated that present and reasonably foreseeable development within the watershed also would result in impacts to oak woodland and oak/grass vegetation communities, but these impacts can not be quantified with existing information. Note also that, generally speaking, most of the existing and future projects in the watershed occur or would occur on slopes of 0 to 20 percent as these lower slopes are easier to grade and build upon than are steeper slopes, and are often adjacent to areas already developed.

Past, present, or reasonably foreseeable mitigation, other than for the proposed RMDP/SCP project, is difficult to estimate within the context of this cumulative analysis because of the variety of size, type, and impact of each past, present, or reasonably foreseeable project. In particular, for upland vegetation communities (*e.g.*, coastal scrub, chaparral, and grassland), depending on whether the impact is significant, mitigation in terms of replacement acreage may or may not have been, or be, required. Without a state- and/or federally listed species inhabiting impacted areas (*e.g.*, coastal California gnatcatcher occupation of coastal scrub), regulation of impacts of upland vegetation communities and requirements for mitigation are variable. Projects that have special-status vegetation communities and/or species on site often have and would require some set aside of open space. In addition some development projects may be required to provide habitat conservation areas.

For state and federal jurisdictional wetlands (including riparian) subject to regulation under Fish and Game Code section 1600 *et seq.* and Clean Water Act (CWA) section 404 (33 U.S.C. 1251 *et seq.*), CDFG and Corps implement "no net loss" policies as part of their respective permitting process for impacts to wetlands. California Executive Order W-59-93 established a State Wetland Conservation Policy (SWCP) that provides for the preservation and protection of wetland communities (State of California Executive Department 1993). A central goal of the SWCP is to ensure no overall net loss and to achieve a long-term net gain in the quantity, quality, and permanence of wetland acreages and values. Similarly, per a 1990 Memorandum of Agreement (MOA) between the EPA and the Corps to demonstrate compliance with the CWA section 404(b)(1) guidelines, it is the policy of the Corps to achieve the goal of no overall net loss of wetlands functions and values/services, although it is recognized in the MOA that no net loss of functions and values/services may not be achieved in every permit action (EPA and U.S. Army 1990). With these policies in place, it is reasonable to assume that the permanent cumulative impacts to jurisdictional wetlands would be substantially less than estimated for this analysis.

Oak woodlands also receive ~~some level of protection from county ordinances and CEQA itself (Pub.Res.Code § 21083.4).~~ that would reduce permanent cumulative impacts. As described in **Subsection 4.4.7.2.a.2.b**, Oaks, the County of Los Angeles Oak Tree Ordinance (CLAOTO) regulates impacts to oak trees with trunks that are at least 8 inches in diameter (or that have two trunks totaling at least 12 inches in diameter) as measured 4.5 feet above natural ground (County of Los Angeles 1988). CLAOTO requires that all potential impacts to regulated oak trees be reported in a detailed oak tree report and usually requires mitigation as a condition of an Oak Tree Permit issued by the County. Ventura County also has "Tree Protection Regulations" (County of Ventura 1992) that regulate impacts to oak trees in unincorporated areas of the County that are at least 9.5 inches in circumference (or that have two or more trunks with at least one of the trunks 6.25 inches in circumference) as measured at 4.5 feet above the ground. Impacts to oak trees in Ventura County are mitigated per the Ventura County Non-Coastal

Zoning Ordinance section 8107-25.10 - Offsets for Altered, Felled, or Removed Trees, which requires a minimum 1:1 ratio of mitigation.

In addition, CEQA, through Public Resources Code § 21083.4, requires that counties analyze and mitigate significant impacts to oak woodlands. Under this Section, an “oak” is defined as a “native tree species in the genus *Quercus*, not designated as Group A or Group B commercial species pursuant to regulations adopted by the State Board of Forestry and Fire Protection pursuant to Section 4526, and that is 5 inches or more in diameter at breast height.” Although, the statute does not provide a definition of “oak woodland,” Public Resources Code § 12220(g) provides helpful guidance. It defines “forest land” – which would include oak woodland -- as any “land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for mangment of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.”

Using Section 12220(g) as a guide, this EIR defines “oak woodland” as an area with at least 10% cover by oak trees with an understory of non-grass vegetation and at least 20% cover by oak trees with an understory of grass vegetation. Oak/grass includes areas where oak trees comprise between 10% and 20% of the total cover with an understory of grass vegetation. As part of this EIR’s Vegetation Communities analysis, biologists surveyed the site and identified all oak woodlands meeting this definition. Note that these surveys not only captured the oak woodland vegetation communities, but also the entire range of oak trees in terms of size and maturity, including all trees with trunk diameters of five (5) inches or more, measured at breast height, as required under Public Resources Code § 21083.4(a). These surveys indicate that the project site supports 3.4 acres of oak woodland, as defined.

Based on the proposed grading plan, 3.4 acres of coast live oak woodland would be developed (including permanent and temporary impacts). This is considered a significant cumulative contribution to a significant effect, thus triggering the mitigation requirements set forth in Public Resources Code § 21083.4.

To address the Landmark Village project’s impacts on oaks and oak woodlands, this EIR proposes ~~The proposed mitigation encompasses~~ a three-part mitigation strategy that incorporates (1) planting replacement trees, per the requirements of CLAOTO and previously incorporated measure SP-4.6-48; (2) additional replacement ratios recommended in this EIR for impacts to oak trees and oak woodlands where they occur within stream channels falling under CDFG and Corps jurisdiction, per 1600 and 404 (LV 4.4-1); and (3) additional measures recommended in this EIR for tree replacement or woodland restoration/enhancement to mitigate for oak trees and woodland occurring in uplands outside CDFG and Corps jurisdiction at a minimum ratio of 2:1 (LV 4.4-29). These mitigation measures not only ensure that the Landmark Village project complies with CLAOTO and Public Resources Code § 21083.4, they ensure that the project’s contribution to cumulative impacts on oaks and oak woodlands will be less than

~~cumulatively considerable. With these regulations, it is reasonable to assume that the permanent cumulative impacts to oak woodlands would be substantially less than would occur absent mitigation.~~

Of the approximately 85,200 acres that are either developed currently or, based on the project list, expected to be developed in the foreseeable future, the proposed RMDP/SCP project would consume 5,590 acres of the approximately 37,890 acres of impact from recent past, present, and reasonably foreseeable future projects. CEQA requires an analysis of whether this contribution to a significant impact can be rendered less than "cumulatively considerable," as that term is defined under CEQA (14. Cal. Code Reg. § 15130):

An EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. The Lead Agency shall identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable. (emphasis added)

As to the proposed Landmark Village project, the Newhall Ranch Specific Plan Program EIR and this EIR impose measures on the applicant to mitigate the loss of vegetation communities. These measures include: (1) replacing the functions and values/services of riparian vegetation communities that may be lost through construction; and (2) the dedication and maintenance of existing natural lands in the Open Area, River Corridor SMA, High Country SMA, and Salt Creek area, totaling approximately 9,753 acres. Mitigation also includes compliance with permits from federal and state agencies for impacts to wetlands and water quality (*i.e.*, NPDES and section 401 water quality certifications, section 404 individual permits, and section 1602 Streambed Alteration Agreements). Mitigation for impacts to wetlands would achieve the goals of CDFG's and Corps' "no net loss" policies described above and, therefore, would result in no cumulative contribution to impacts to jurisdictional wetlands. Overall, these mitigation measures would offset the proposed Landmark Village project's direct removal of ~~most~~ vegetation communities in the proposed project area. The measures also would offset potential secondary impacts to purple needlegrass grassland outside of the Landmark Village project area.

~~Thus, with the mitigation required by the Newhall Ranch Specific Plan Program EIR and recommended in this Landmark Village EIR (see **Subsection 4.4.10, Project Mitigation Measures**), the proposed Landmark Village project would not result in a cumulatively considerable contribution to potential significant cumulative impacts on all of the vegetation communities and land covers in the SCRW, except for coastal sage scrub. (See **Subsection 4.4.12.b** of this EIR.) The California GAP vegetation (UCSB, 1999, Recirculated Draft EIR, **Appendix 4.4**) and the project level mapping for the RMDP/SCP project area include approximately 174,000 acres of coastal scrub in the SCRW, including 231.9 acres in the Landmark Village project site (see **Table 4.4-9**). Without accounting for the proposed RMDP/SCP project, other past, present, and reasonably foreseeable future projects within the SCRW result in a loss of approximately 19,000 acres of coastal scrub since the California GAP data were compiled. Beginning well before 1998, coastal scrub already had been extensively cleared throughout much of California for various land use changes (mainly agriculture and urbanization). For example, Westman (1981) analyzed historic losses of coastal scrub state wide and estimated that only about 15 percent of its original acreage was still extant at that time. Most coastal scrub occurs on relatively gentle slopes (0 to 20 percent where land use conversions for agriculture and development tend to be concentrated because these lands are more~~

developable. The SCRW has been less extensively developed than other regions in southern California and coastal scrub loss in the watershed probably has been proportionally less than Westman's (1981) state wide estimate. Still, it is likely that much of the upland agricultural land mapped by the 1998 California GAP project in the SCRW supported coastal scrub habitat prior to these land use conversions. The acreage of coastal sage scrub lost prior to 1998, however, cannot be quantified for this analysis. Most coastal scrub alliances and associations mapped on the RMDP/SCP project site are ranked as G4S4 by CDFG (2007, Recirculated Draft EIR, **Appendix 4.4**), meaning that they are "apparently secure" both globally and within California, "but factors exist to cause some concern; *i.e.*, there is some threat." For coastal scrub, the primary concerns are the extensive and ongoing habitat loss (Westman 1981; O'Leary 1990). Further, coastal scrub is used almost exclusively by the federally listed threatened coastal California gnatcatcher (Atwood 1993), and many other special status species occur regularly in coastal scrub (Davis *et al.* 1994). In addition to land use conversions, much coastal scrub vegetation has been lost due to secondary effects of population increases and land development throughout southern California. These effects include habitat fragmentation, invasive non native species, livestock grazing, off highway vehicles, altered fire regime, and perhaps air pollution (O'Leary 1995; Minnich and Dezzani 1998; Rundel 2007). Some coastal scrub vegetation occurs on National Forest lands, where land use management is generally compatible with habitat conservation, but these areas tend to be at its upper elevational limits, where many of the special status species associated with coastal sage scrub are less common or absent (Stephenson and Calcarone 1999).

Based on this analysis, the proposed RMDP/SCP project and other past, present, and reasonably foreseeable future projects would result in a cumulative loss of approximately 20,500 acres of coastal scrub in the SCRW. This loss represents about 54 percent of the total 37,890 acres loss of all vegetation communities in the SCRW due to past, present, and reasonably foreseeable projects, including the proposed RMDP/SCP project; *i.e.*, most of this development in the watershed has or will take place on land dominated by coastal scrub. The proposed RMDP/SCP project's direct (RMDP/SCP) and indirect (buildout of the Specific Plan, VCC, and Entrada planning areas, including Landmark Village) effects would result in the permanent removal of approximately 1,520 acres of coastal scrub communities, including 231.9 acres within the Landmark Village project area (see **Table 4.4-9**), or about 35 percent of the 4,340 acres of coastal scrub communities present in the RMDP/SCP project area; proportionally lower than the overall estimated loss, but still substantial. Also, when considered from a landscape level, the coastal scrub community on site represents a relatively large, intact tract within this portion of the SCRW. Due to coastal scrub's high habitat value for a variety of special status plants and wildlife, the extensive coastal scrub losses in southern California prior to 1998, and the substantial acreage lost as a result of past, present, and reasonably foreseeable projects, including the proposed RMDP/SCP project, the loss of 20,500 acres of coastal scrub could be a potential significant cumulative effect. The proposed Landmark Village project's contribution to this loss would be cumulatively considerable.

Whether the proposed Landmark Village project's cumulatively considerable contribution to the potential significant cumulative effect of coastal scrub loss in the SCRW can be reduced to a level less than significant is considered in the broader context of conservation planning for the community. In some regions of southern California, regional planning projects have been designed to limit continued losses of coastal scrub (*e.g.*, state Natural Community Conservation Planning (NCCP) and federal Habitat Conservation Plan (HCP) programs). These programs are designed to preserve large, contiguous tracts of coastal scrub and other natural vegetation communities in permanent managed open space areas and to minimize fragmentation and other secondary impacts to these preserved areas to mitigate for the losses that do occur. There is currently no similar comprehensive, large scale planning effort in the SCRW to ensure long term coastal scrub conservation in large, unfragmented tracts within the watershed.

~~In addition, long term secondary (off site) impacts to coastal scrub would occur near developed areas after project buildout. These landscape level impacts and "edge" effects include the increased risk of non native, invasive plant and animal species (e.g., Argentine ants), human disturbance (e.g., trampling, illegal trails), and shortened fire intervals that could result in type conversion of coastal scrub to annual grassland. These RMDP/SCP project induced secondary impacts to coastal scrub are mitigated at the project level to a level less than significant primarily through dedication of lands in the High Country SMA, River Corridor SMA, Salt Creek area, which include approximately 1,900 acres of coastal scrub, as well as preservation of smaller patches in Open Areas within or adjacent to the proposed development areas. Despite~~With the mitigation measures required by the Newhall Ranch Specific Plan Program EIR and recommended by this EIR, the Landmark Village open space areas, in association with the greater RMDP/SCP project area, would result in a large-scale, permanent and managed open space system, which would ensure long-term conservation of coastal sage scrub and other vegetation communities in large, unfragmented tracts of land (i.e., Open Area, River Corridor SMA/SEA 23, High Country SMA/SEA 20, and Salt Creek area) within the watershed. Thus, the proposed Landmark Village project would not result in a cumulatively considerable contribution to potential significant ~~and unavoidable~~ cumulative ~~loss of coastal scrub~~impacts on all of the vegetation communities and land covers in the SCRW.

(3) Impacts to Common Wildlife Organized by Species Guilds and Other Associations

The cumulative impact analysis for common wildlife also uses the "project list" approach for the watershed, as applied to the wildlife guilds shown in **Table 4.4-25**. For each wildlife guild or other association, the habitat relationships were analyzed in the same manner as the vegetation communities and land covers described above in **Subsection 4.4.11.c.1**.

The Santa Clara River Watershed is Relatively Undeveloped and Has Substantial Existing and Designated Open Space Providing Habitat For Wildlife. As shown in **Table 4.4-24**, approximately 991,000 acres of the SCRW are currently undeveloped and capable of providing habitat for wildlife.³⁰ With regard to vegetation communities and land covers mapped in the proposed RMDP/SCP project area that also occur elsewhere in the watershed, the watershed includes approximately 836,000 acres. The amount of undeveloped habitat for the different wildlife guilds in the SCRW ranges from approximately 5,200 acres of oak woodlands for the Bird – Upland Woodland guild to approximately 836,000 acres for the Insect and Bat guilds.³¹ This latter figure reflects the fact that insects and bats can use virtually all the undeveloped habitat in the SCRW. Of the approximately 991,000 acres of undeveloped land in the SCRW,

³⁰ This approximately 991,000 acres figure is derived by subtracting the number of existing development acres (47,270) from the total size of the entire SCRW (1,038,100 acres).

³¹ This does not mean, however, that species in each guild actually use all of the available habitat; nor does it mean that species in each guild have been observed on each acre of available habitat. For example, agricultural and disturbed lands are considered habitat for the Insect and Bat guilds and, therefore, are included in the total acreage of habitat for these guilds; however, both insects and bats tend to concentrate activities in microhabitats within the larger landscape and, therefore, are not uniformly distributed through the 836,000 acres.

Mountains and the "Fillmore Greenbelt" to the northwest that further links to the Los Padres National Forest and the Angeles National Forest to the north. Most of the upland wildlife species probably use the High Country SMA/SEA 20 and Salt Creek area extensively.

North-south movement between the Santa Susana Mountains and the "Fillmore Greenbelt" requires wildlife to cross SR-126. **Figure 4.4-21** shows the three existing crossings in Ventura County west of the proposed RMDP/SCP project area (including the Landmark Village project site) that can be accessed by wildlife moving along the Santa Clara River. These crossings, which would not be affected by the proposed RMDP/SCP project, are arched culverts large enough for vehicles to pass through and are large enough to convey wildlife. These crossings measure about 4.4 meters (14 feet 7 inches) in height, 7.5 meters (25 feet) in width, and 51.8 meters (170 feet) in length, resulting in an openness factor of 0.65, which well exceeds the openness factor of 0.25 found by Donaldson (2005) to be adequate for white-tailed deer. The easternmost of these crossings would serve wildlife movement within and through the proposed RMDP/SCP project area *via* the Salt Creek corridors, as well as Tapo Canyon in Ventura County.

The Landmark Village project site includes a potential north-south local wildlife corridors that connect to the Santa Clara River, Chiquito Canyon north of the Santa Clara River. Under current conditions, the function of this potential wildlife corridor to convey north-south wildlife movement and access to and from the Santa Clara River is limited because the Landmark Village tract map area is currently used for agriculture and frequently devoid of vegetative cover. Therefore, Chiquito Canyon is not expected to be a substantial part of a currently functioning regional north-south wildlife movement corridor. Coyotes may use this potential wildlife corridor, but species typically requiring cover, such as bobcat and mule deer, as well as less mobile species that require "live-in" habitat, are not as likely to use this potential corridor under existing conditions. Therefore, in the context of current wildlife movement throughout the Specific Plan area, constraining Chiquito Canyon, a potential north-south movement corridor, would be adverse, but not significant. In addition, the River Corridor SMA is directly connected to Castaic Creek, which provides regional wildlife movement to the north.

In addition to the High County SMA/SEA 20 and Salt Creek area, the Santa Clara River corridor, including the reach through the Landmark Village project site, is a regionally important riparian and wetland resource, in part due to its role as a functioning wildlife corridor and habitat linkage for east-west wildlife movement. The River Corridor SMA/SEA 23 (*i.e.*, those portions of the River corridor that lie within the proposed RMDP/SCP project area) would be approximately 1,000 to 2,000 feet wide and would remain sufficiently wide after development to accommodate flood events while maintaining the existing mosaic of habitat types currently present along the river (PACE 2008, Recirculated Draft EIR, Appendix 4.4). Specifically within the Landmark Village project site, the River would be maintained as

would not result in a cumulatively considerable contribution to potential significant cumulative impacts to regional wildlife habitat landscape linkages and local wildlife movement corridors in the SCRW.

(5) Impacts to Special-Status Species

The cumulative impact analysis for special-status species also uses the "project list" approach for the watershed. This analysis is organized into five separate special-status categories:

- State and/or Federally Listed and California Fully Protected Wildlife Species
- California Species of Special Concern (CSC)
- California Special Animals, California Watch List Species, Specially Protected Mammals, and CDFG Trust Resource Species
- State and/or Federally Listed Plant Species
- California Native Plant Society (CNPS) and Locally Regulated Plant Species

The listed and California Fully Protected Species are analyzed in the greatest detail because they have the greatest sensitivity and generally would be expected to be most affected by cumulative impacts. For each species, the habitat relationships were analyzed in the same manner as the vegetation communities and land covers described above in **Subsection 4.4.11.c.1**. Except where noted, the combined California GAP data (UCSB, 1999, Recirculated Draft EIR, **Appendix 4.4**) and project-level data were used for the cumulative impact analyses because the analysis is within the context of the entire watershed.

Because of the numerous wildlife species in the two categories: (1) California Species of Special Concern (CSC); and (2) Special Animals, Watch List, Specially Protected Mammals, and Trust Resources, the analyses for the two categories are generalized to the guild level (*e.g.*, Bird – Raptor, Reptile and Amphibian – Semi-aquatic, *etc.*). The detail of the analysis is scaled to the sensitivity of the species group. For example, CSC Bird – Riparian species are analyzed in more detail than Special Animal Bird – Riparian. Where the detailed analyses for the Listed and California Fully Protected Species are applicable to species in the lower sensitivity categories (*e.g.*, least Bell's vireo analysis to the CSC Bird – Riparian guild), cumulative impacts are incorporated and summarized.

(a) Listed and California Fully Protected Wildlife Species

This section addresses cumulative impacts the following federally and state-listed and/or California Fully Protected Species:

- arroyo toad (FE)
- American peregrine falcon (CE, CFP)
- California condor (FE, CE, CFP)

The USFWS issued a Final Rule for critical habitat for the arroyo toad on February 9, 2011 (76 FR 7246). The revised critical habitat designation totals 98,366 acres in 21 habitat units, some of which are further divided into subunits. The revised critical habitat designation for arroyo toad includes Subunit 6b located in the Santa Clara River and Castaic Creek; and the proposed RMDP/SCP project site includes a portion of this Subunit. Subunit 6b comprises approximately 1,003 acres (approximately 1%) of the total 98,366 acres of arroyo toad critical habitat. Of this, arroyo toad critical habitat within the proposed RMDP/SCP project area totals approximately 49 acres.

~~In 2005, USFWS designated 11,695 acres of critical habitat for arroyo toad (substantially downsizing the 95,655 acres proposed in February 2004), and excluded the proposed Unit 6 (which contained portions of the proposed RMDP/SCP project site) along with portions of many Southern California counties for economic reasons (70 FR 19562-19633). In 1999, USFWS published the Arroyo Southwestern Toad Recovery Plan (USFWS 1999), but the Santa Clara River was not specifically identified in the Recovery Plan as having a conservation role in the recovery strategy for the species. In the Santa Clara River watershed, six federal biological opinions were issued for the arroyo toad between 1993 and 2006 (Table 4.4-20), including one for the Natural River Management Plan upstream of the proposed RMDP/SCP project.~~

Implementation of the RMDP and buildout of the Specific Plan, VCC, and Entrada planning areas would result in the permanent loss of 120 acres (20%) of arroyo toad critical habitat in the RMDP/SCP project site. Approximately 434 acres (73%) of critical habitat would be protected and managed in the River Corridor SMA/SEA 23 adjacent to the Landmark Village project site. Without accounting for past, present, or reasonably foreseeable mitigation, impacts to arroyo toad habitat in the SCRW resulting from present and reasonably foreseeable projects, including the RMDP/SCP project, could be a potential significant cumulative impact. The contribution of the proposed Landmark Village project to this potential significant cumulative impact could be cumulatively considerable, absent mitigation.

~~For the arroyo toad, the California GAP data are not refined enough to portray suitable arroyo toad habitat. Implementation of the RMDP and buildout of the Specific Plan, VCC, and Entrada planning areas would result in the permanent loss of 59 acres (7.4 percent) of modeled Category 1 habitat on the proposed RMDP/SCP project site, defined as habitat containing all the primary constituent elements used to designate critical habitat for the species (70 FR 19562). However, 25 acres (32.6 percent) of Category 2 habitat (habitat containing most of the primary constituent elements) and 705 acres (66.6 percent) of Category 3 habitat (primarily uplands adjacent to the Santa Clara River corridor that could be used for aestivation and hibernation, but which lack hydrology to support breeding) would also be permanently lost. Without accounting for past, present, or reasonably foreseeable mitigation, impacts to arroyo toad habitat in the SCRW resulting from present and reasonably foreseeable projects, including the proposed RMDP/SCP project, could be a potential significant cumulative impact. The contribution of the proposed~~

~~RMDP/SCP, including the Landmark Village project, to this potential significant cumulative impact could be cumulatively considerable, absent mitigation.~~ Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed RMDP/SCP project, in close proximity to occupied arroyo toad habitat also could result in long-term secondary effects, including disruption of nocturnal activities and greater vulnerability to predation by nocturnal predators (such as owls and coyotes) as a result of nighttime lighting; greater vulnerability to predation by pet, stray, and feral cats and dogs as well as other mesopredators (see Crooks and Soulé 1999); collecting by children; degradation of habitat from increased human use (*e.g.*, trampling, trash, and off-road vehicles) and altered fire regimes (likely too frequent fire); invasion by exotic plant (*e.g.*, giant reed, tamarisk, and pampas grass) and wildlife species (*e.g.*, Argentine ants, bullfrogs, African clawed frogs, exotic fish, and crayfish); use of pesticides; and increased risk of roadkill on roads adjacent to occupied areas. At the watershed level these secondary effects could be a potential significant cumulative impact. The contribution of the proposed RMDP/SCP, including the Landmark Village project, to this potential significant cumulative secondary impact could be cumulatively considerable, absent mitigation.

The mitigation required by both the Newhall Ranch Specific Plan Program EIR and this EIR to offset project-level significant impacts to arroyo toad habitat would result in a large, managed open space system (see **Subsection 4.4.10, Project Mitigation Measures**). This open space system would also reduce long-term secondary impacts on arroyo toad habitat. These mitigation measures include preservation, restoration, and enhancement of riparian and wetland habitat, controls on public access, invasive species controls, conformance with permits from federal and state agencies for impacts to wetlands and water quality (*i.e.*, NPDES and section 401 permits), and lighting controls. Large areas of suitable habitat for this species would be protected in the River Corridor SMA/SEA 23. The Floodplain Hydraulics Impacts Assessment (PACE 2008, Recirculated Draft EIR, **Appendix 4.4**) found that there would be no significant impacts in water flows, velocities, depth, sedimentation, or floodplain and channel conditions downstream of the proposed RMDP/SCP project area over the long term as a result of the proposed RMDP/SCP project improvements. These hydrologic effects were also found to be insufficient to alter the amount, location, and nature of aquatic and riparian habitats within the proposed RMDP/SCP project area and downstream into Ventura County. The technical analysis further determined that the River would retain sufficient width to allow natural fluvial processes to continue. Following buildout, the River Corridor floodplain would remain 1,000 to 2,000 feet wide and retain the mosaic of habitats, including the relatively narrow wetted channel, benches, and dry terraces that support various special-status species and meet their life history needs. These habitats and the populations of the species within and immediately adjacent to the River Corridor would not be substantially affected. A total of 738 acres (92.6 percent) of existing Category 1 habitat for the arroyo toad on the proposed RMDP/SCP project site would be maintained within the River Corridor SMA/SEA 23.

A variety of specific mitigation measures also would be implemented by the proposed Landmark Village project to avoid and reduce potential long-term secondary impacts to arroyo toad. Measures would be implemented to control human activities in the River Corridor SMA/SEA 23, including homeowner education and restrictions on recreational activities. Pet, stray, and feral cats and dogs would be leashed or otherwise controlled in or adjacent to open space areas. All lighting along the open space-urban interface would be downcast. Pesticides would be controlled through an integrated pest management (IPM) plan. Argentine ant invasions of upland habitats in the open space system would be monitored and

controlled to extent feasible. Implementation of these measures would allow this species to persist on site after development in the River Corridor SMA/SEA 23.

The vast majority of existing Category 1 habitat (92.6 percent) for the arroyo toad on the proposed RMDP/SCP project site would be protected and managed in the River Corridor SMA/SEA 23 and lands outside the 100-year floodplain would be conserved. This preservation and management would also reduce potential long-term secondary impacts to a level that is adverse but not significant. The arroyo toad has not been documented to breed on the Landmark Village site, as indicated by no observations of adult toads during focused surveys. The flow regime from the wastewater treatment plant upstream of the RMDP/SCP project site fluctuates daily and does not support hydrologic regimes consistent with breeding habitat (*i.e.*, semi-permanent breeding pools). It is not expected that there would be a loss of an extant breeding population and no substantial loss of Category 1 habitat for this species on site. The largest populations in the SCRW occur in the Los Padres National Forest in Sespe and Piru creeks. These populations are not at risk from urban development and, with proper management, they are expected to expand in the future.

For the reasons set forth above, the proposed RMDP/SCP, including the Landmark Village project, would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

American Peregrine Falcon (CE, CFP). The American peregrine falcon occurs occasionally in the proposed RMDP/SCP project area. One American peregrine falcon was observed hunting along the Santa Clara River corridor near the Grapevine Mesa area within the Newhall Ranch Specific Plan area by Guthrie in July 2000 (Guthrie 2000), and an adult male was observed hunting over the Wolcott agricultural field by Bloom Biological, Inc. in late December 2007 (Bloom Biological 2008). No other occurrences of this species have been documented on site during annual bird surveys between 1988 and 2008. American peregrine falcons have never been documented nesting in the proposed RMDP/SCP project area. This species is sensitive to human disturbance and usually nests in areas that are remote from human activities, such as cliffs, although tall buildings, bridges, or other tall man-made structures are also suitable for nesting if they are protected from human disturbance. Such features that would be suitable for nesting by the peregrine falcon are absent in the RMDP/SCP project area; therefore, it is not expected to nest on site.

The California breeding range for the American peregrine falcon has been expanding and now includes the Channel Islands, the coast of southern and northern California, inland north coastal mountains, the Klamath Mountains, Cascade Range and the Sierra Nevada (CDFG 2005). In California, the American peregrine falcon is an uncommon breeder or winter migrant throughout much of the state. It is absent from desert areas (Zeiner *et al.* 1990A). Active nests have been documented along the coast north of Santa Barbara, in the Sierra Nevada, and in other mountains of northern California. As a transient species, the American peregrine falcon may occur almost anywhere that suitable habitat is present (Garrett and Dunn 1981). One pair occurs within the Angeles National Forest (Stephenson and Calcarone 1999), and one occurs on the Vincent Thomas Bridge at the Port of Los Angeles in Los Angeles County. Wintering migrants can be seen inland throughout the Central Valley, in the western Sierra Nevada, along the coast, and occasionally on the Channel Islands (Zeiner *et al.* 1990A). As a transient species, the American

contiguous open space system totaling approximately 6,300 acres comprised of riparian and upland habitats that provide foraging habitat for American peregrine falcon. This set-aside also would reduce potential long-term secondary effects, such as increased human activity, because birds would have substantial alternative habitat in which to forage. Potential secondary poisoning from pesticides would be controlled through an integrated pest management (IPM) plan.

In addition to these mitigation measures which would reduce impacts at the project level, this species is only an occasional visitor and only documented as foraging on the RMDP/SCP project site. This species is known to forage throughout the suitable habitat within the watershed and California. Its nesting is usually limited to areas with limited human disturbance. American peregrine falcon is known to forage within National Forest system lands within the watershed in association with rivers and lakes.

For the reasons set forth above, the proposed RMDP/SCP, including the Landmark Village project, would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

California Condor (FE, CE, CFP). California condor populations exist in Arizona, southern California, Utah, and northern Baja California (CDFG 2005). California condors are known to exist and nest in the Sespe Condor Sanctuary within the SCRW approximately 30 miles northwest of the proposed RMDP/SCP project area. This species is extremely mobile, and because of the extensive foraging range of this species, California condors could include the proposed RMDP/SCP project area, including the Landmark Village project area, within the potential foraging range of the Sespe population. Surveys for the California condor were included as part of other raptor and avian species surveys that were conducted along the Santa Clara River and throughout upland areas of the RMDP/SCP project area (Bloom Biological 2007, 2008). While California condor foraging flights have been known to take individuals over the Santa Clarita Valley, these flights are generally at high altitudes. Until April 2008, California condors had not been known to nest or land within the RMDP/SCP project area within the last 25 years (Bloom Biological 2007, 2008). In April 2008, a California condor was observed feeding on a dead calf in a Potrero side canyon by wildlife biologist Chris Niemela (Carpenter 2008) (**Figure 4.4-24, RMDP/SCP – Listed and California Fully Protected Wildlife Species Occurrences**). The USFWS also provided information to Bloom that California condors fitted with GPS transmitters had landed on Newhall Ranch on several days from April through July 2008 (Root 2008). In January 2009, up to five California condors were detected feeding on a dead calf in the middle section of Potrero Canyon south of Potrero Mesa between January 27 and 30 (Niemela 2009). A follow-up visit by Chris Niemela was conducted at the request of the USFWS to photodocument the calf carcass and site where the feeding occurred.

A review of the updated 2009 condor flight data provided by the USFWS shows that the Landmark Village project site and the proposed mitigation lands in the High Country SMA, Salt Creek area, and River Corridor SMA are located under a commonly used California condor flight path between the Sespe

Wilderness area to the northwest and the San Gabriel Mountains National Forest to the southeast of the Landmark Village project site. In addition, California condors routinely overfly the project vicinity and are known to feed in portions of the larger RMDP/SCP area where grazing currently occurs and cattle carcasses are sometimes available. The data also suggest that condors will likely opportunistically feed on cattle carcasses or other large mammal carcasses (e.g., mule deer) in the Landmark Village project vicinity and proposed mitigation lands in the future. The review of the 2009 USFWS flight data, in addition to coordination with USFWS staff, also suggests that the condor is expanding its use of the region and can be expected to continue overflights of the Santa Clarita Valley and adjacent National Forests to the north and southwest of the Landmark Village project site.

Specifically, the condor telemetry/GPS data flight data from the USFWS are available in three data ranges: April 20, 2002, to January 29, 2009; January 1, 2009, to July 30, 2009; and August 1, 2009, to August 31, 2009. There is minor overlap in the data during the month of January 2009. Between April 20, 2002, and January 29, 2009 (80,402 total points), 161 points (0.2% of the overall recorded points) representing 16 unique birds were recorded within the Newhall Ranch Specific Plan area, Salt Creek area, Entrada, Valencia Commerce Center, and Legacy. Between January 1, 2009, and July 30, 2009 (36,377 total points), 300 points (0.8% of the overall recorded points) representing 13 unique birds were recorded within the Newhall Ranch Specific Plan area, Salt Creek area, Entrada, Valencia Commerce Center, and Legacy. Between August 1, 2009, and August 31, 2009 (6,800 total points), no points were recorded within the Newhall Ranch Specific Plan area, Salt Creek area, Entrada, Valencia Commerce Center, and Legacy.

Critical habitat for the California condor was designated by the USFWS on September 22, 1977 (42 FR 47840-47845), however, no critical habitat was designated on the proposed RMDP/SCP project site, which includes the Landmark Village project site. The nearest critical habitat area is the Sespe-Piru Condor Area, six to seven miles north of the proposed RMDP/SCP project site. The California Condor Recovery Plan was published by the USFWS on February 26, 1980 (USFWS 1980); however, no recovery activities were identified for the proposed RMDP/SCP project site or nearby vicinity.

The California condor requires habitat that contains an adequate food supply (carrion), open space areas, and reliable winds and air movement to allow for long-duration soaring during foraging. Nest habitat typically includes cliff faces and, occasionally, large tree snags with cavities. Condors are not expected to nest in the RMDP/SCP project area due to the general lack of adequate nesting habitat and likely only opportunistically forage in the RMDP/SCP project area, as well as in other present and foreseeable future projects analyzed here for cumulative impacts. In general, these areas probably do not support large populations of large mammals (e.g., mule deer) across the broad landscape area or suitable nesting sites. For these reasons, the proposed RMDP/SCP project, including Landmark Village, in combination with other present and foreseeable future projects, is not expected to result in a potential significant cumulative impact to this species due to the loss of foraging habitat.

The risk of direct injury or mortality of individual California condors due to construction activities associated with present and reasonably foreseeable projects, including the proposed RMDP/SCP project, is low. However, construction debris, litter, leaking equipment, or road kill can attract this species to construction sites. This could subject condors to strikes by construction vehicles. Condors are curious birds and have been documented in close association with oil pumps and human activity on the Los Padres National Forest. During cleanup activities at trash sites, for example, condors have been observed sitting on guard rails adjacent to the cleanup activities. If individuals were injured or killed during construction activities, this could be a potential significant cumulative impact because the loss of any individuals of this species likely would reduce its chance for long-term survival in the wildlife. The contribution of the proposed RMDP/SCP project, including the Landmark Village project, to this potential significant cumulative impact could be cumulatively considerable, absent mitigation.

foreseeable mitigation, or the RMDP/SCP project's (which includes Landmark Village) individual contribution to mitigation for loss of suitable habitat, this could be a potential significant cumulative impact on habitat that is suitable for the species. Because this federally listed species occurs sporadically in the watershed and its selection of habitat for dispersal and potentially breeding in the SCRW is not understood, the relative value of coastal scrub habitat in the watershed for this species also is not known. Even a small loss of habitat, if located in a strategic area for dispersal or breeding, could have a substantial adverse effect on the habitat use and distribution of the coastal California gnatcatcher in the SCRW if it disrupted dispersal or breeding activities. The proposed RMDP/SCP project's contribution to this potentially significant cumulative impact is 1,520 acres of coastal scrub, including ~~231.9~~155.7 acres of coastal scrub within the Landmark Village project (see **Table 4.4-9**), which could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects in the SCRW, including the proposed RMDP/SCP project, could also result in long-term secondary impacts, including habitat fragmentation; wildfire; increased human activity; lighting; pesticides, which may cause secondary poisoning and loss of food resources; harassment by pet, stray, and feral cats and dogs and other mesopredators; and Argentine ants that may prey on nestlings. At the watershed level these secondary effects could be a potential significant cumulative effect. The contribution of the proposed RMDP/SCP project, including the Landmark Village project, to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

Based on existing survey information, two dispersing coastal California gnatcatcher individuals have been documented in the RMDP/SCP project vicinity and nesting has not been observed. Approximately 154,000 acres of coastal scrub habitat would remain in the watershed, although how much of this habitat is suitable for dispersal or breeding is unknown. There is at least one breeding occurrence in the SCRW in Plum Canyon. In addition, mitigation required by the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended by this EIR would result in a large, managed open space system (**Subsection 4.4.10, Project Mitigation Measures**). The proposed RMDP/SCP project also includes large mitigation areas in the High Country SMA/SEA 20 and Salt Creek area that would conserve approximately 1,940 acres of coastal scrub and would allow for dispersal by coastal California gnatcatchers.

predation by exotic predators, such as bullfrogs and non-native fish. However, due to the approximately five-mile distance from documented occurrences of southern steelhead at Piru Creek and the intervening Dry Gap, these potential secondary effects would be substantially attenuated before they could affect any downstream habitat and individuals. Therefore, the proposed RMDP/SCP, including the Landmark Village project, is not expected have a considerably cumulatively contribution to potential significant secondary cumulative impacts in the SCRW.

Although the RMDP/SCP project would not contribute to potential significant secondary impacts to the steelhead in the SCRW, and, therefore, no mitigation for secondary cumulative impacts is required, the combined mitigation required by the Newhall Ranch Specific Plan Program EIR and this EIR (**Subsection 4.4.10, Project Mitigation Measures**) would additionally reduce the potential for secondary impacts to southern steelhead and its habitat downstream of the RMDP/SCP project site. Impacts such as increased chemical pollutants, sedimentation, and increased human activity would be mitigated by measures such as the protection and management of the River Corridor SMA/SEA 23, creation of buffer areas between the River Corridor SMA/SEA 23 and development, water quality requirements, and restrictions on public access. PACE (2008, Recirculated Draft EIR, **Appendix 4.4**) found that there would be no significant impacts to water flows, velocities, depth, sedimentation, or floodplain and channel conditions downstream of the RMDP/SCP project area over the long term as a result of the proposed RMDP/SCP project improvements. Furthermore, the Newhall Ranch Wastewater Reclamation Plant (WRP) would be a near-zero discharge facility, and only limited discharge from the WRP to the Santa Clara River would occur during the winter months. Based on an analysis of post-development conditions within the Dry Gap (GSI Water Solutions 2008, Recirculated Draft EIR, **Appendix 4.43**), it was determined that the future WRP discharge would not affect the seasonality (*i.e.*, ephemeral nature) of flows through the Dry Gap.

Impacts to southern steelhead habitat and vagrant individuals and downstream secondary effects would be less than significant. Potential impacts would be further reduced by a set of mitigation measures for other special-status fish that occur in the RMDP/SCP project area (arroyo chub, Santa Ana sucker, unarmored threespine stickleback) required by the Newhall Ranch Specific Plan Program EIR and recommended by this EIR (**Subsection 4.4.10, Project Mitigation Measures**). Therefore, the proposed RMDP/SCP project would not contribute to potential significant cumulative impacts to southern steelhead in the SCRW.

Southwestern Willow Flycatcher/Willow Flycatcher (FE, CE). Breeding populations of the willow flycatcher exist in isolated meadows of the Sierra Nevada and along the Kern, Santa Margarita, San Luis Rey and Santa Ynez Rivers in southern California (CDFG 2005). Breeding populations of the southwestern willow flycatcher exist in Kern, Santa Barbara and San Diego counties and several other locations in southern California (CDFG 2005). Outside of California, breeding populations of the

River at the Interstate 15 crossing, near Victorville. That occurrence has declined due to surrounding urbanization (Stephenson and Calcarone 1999).

Details of the San Emigdio blue butterfly's population status at SCRW occurrences at Bouquet and Mint canyons are unknown. Due to its occurrence in small, widely scattered locations; its susceptibility to habitat loss; and the lack of known occurrences within the SCRW, ongoing development in the watershed could be a potential significant cumulative impact to the San Emigdio blue butterfly.

Vegetation clearing associated with construction of RMDP facilities and fence construction around the Potrero Preserve Area in accordance with the SCP would result in the removal of quail brush plants associated with the colony that occurs outside the Potrero Preserve Area. The construction of Potrero Canyon Road under Alternative 2 would fragment the only known colony on site. Even with replacement, preservation, and management of habitat for this species, as proposed, this impact would be significant and unavoidable, absent further mitigation for Alternative 2. Due to the species' rarity within the SCRW and throughout its known range, and the other conservation issues described above, a significant impact to even a single occurrence would result in a cumulatively considerable contribution to the species in the watershed. Therefore, the RMDP/SCP project-specific impacts of Alternative 2 would be a significant and unavoidable cumulative impact to San Emigdio blue butterfly. However, the Landmark Village project site does not include any populations of San Emigdio blue butterfly, or a concentration of its host plant. Therefore, the Landmark Village project would not considerably contribute to cumulative secondary impacts to this species.

Alternatives 3 through 7 of the RMDP/SCP would largely avoid impacts to occupied habitat and unavoidable residual impacts would be reduced to a level less than significant through avoidance measures. Similarly, these alternatives also would not contribute considerably to a potential significant watershed-wide cumulative impact in the SCRW.

Mollusk. The only special-status species in this guild is the terrestrial gastropod Trask shoulderband snail. Surveys were conducted for the Trask shoulderband snail from November 2009 to January 2010 throughout the RMDP/SCP project area (Huntley 2010), including development areas and mitigation lands (River Corridor SMA, High Country SMA, Salt Creek areas), as well as off-site reference areas that supported suitable microhabitats for the species, including woodrat nests, brush and debris piles, rock piles, isolated rocks, leaf litter, logs, trash/debris piles, and other unique features that may provide soil moisture or refugia. The microhabitats generally are found in coastal scrub, riparian, and chaparral. The surveys for the Trask shoulderband snail were negative (Huntley 2010); however, the presence of two non-special-status helminthoglyptid taxa (Southern California shoulderband snail and Vasquez rocks shoulderband snail) on site indicate that the special-status Trask shoulderband snail has potential to occur.

The Trask shoulderband snail has been documented in scattered locations in coastal Southern California, ranging from San Luis Obispo County to San Diego County, and south into northwestern Baja California, Mexico. The nearest documented occurrences of Trask shoulderband are in Ventura County: the Oxnard Plain, Tierra Rejada Valley, Santa Clara River Valley at Barsdale near Fillmore, Santa Paula Ridge, and one other record with no location provided (Magney 2009). The CNDDDB also has one record for the subspecies from La Jolla Canyon in the Santa Monica Mountains at Point Mugu State Park observed in February 2008 ascending a waterfall (CDFG 2010).

Although there are a few documented occurrences of the Trask shoulderband in the SCRW, this species may be more widespread and common in suitable microhabitats in the SCRW and elsewhere within its range in Southern California. The documented occurrences almost certainly do not represent the actual distribution of the species, because terrestrial snails are highly cryptic, and extensive surveys for these groups have not been systematically conducted. Furthermore, with the exception of a few species, such as Trask shoulderband snail, terrestrial snails are not considered sensitive by the CDFG or USFWS, and focused surveys for this group typically are not conducted. Therefore, present and reasonably foreseeable projects in the SCRW, including the proposed Landmark Village project, could cause the loss of potential microhabitats for the Trask shoulderband snail. Without accounting for past, present, or reasonably foreseeable mitigation for these microhabitats, or the RMDP/SCP project's individual contribution to mitigation for loss of these microhabitats, the loss of potential microhabitats for the Trask shoulderband snail in the SCRW could be a significant impact on the microhabitat for this species. The contribution of the RMDP/SCP project, including Landmark Village, to this potential significant cumulative impact could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Landmark Village project, also could result in potential long-term secondary effects, including habitat fragmentation and isolation of some local populations of these species, making them more vulnerable to extirpation. In addition, over the long term, the close proximity of urban development to suitable habitat could result in disruption of essential behavioral activities (e.g., foraging, reproduction) and greater vulnerability to several potential secondary impacts, including altered wildfires; human-caused habitat degradation (e.g., trampling of vegetation and damage to soil structure, introduction of invasive species, such as Argentine ants and decollate snails (used as a control for garden brown snail) and off-road vehicles); habitat degradation by pet, stray, and feral cats and dogs; and use of chemical pesticides, which may cause poisoning. At the watershed level, these secondary effects could be a potential significant cumulative impact. The contribution of the proposed Landmark Village project, to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The required Newhall Ranch Specific Plan Program EIR mitigation measures, in conjunction with the additional mitigation measures recommended by this Draft EIR (Subsection 4.4.10, Project Mitigation Measures), will result in a large, permanent open space system that will provide suitable microhabitats to

support Trask shoulderband snail in the RMDP/SCP project vicinity. Implementation of these mitigation measures will result in protection and management of lands containing good quality microhabitats in three main interconnected areas: the River Corridor SMA, the High Country SMA, and the Salt Creek area. These areas contain a suite of topographical features, including rocky outcrops, canyons, and drainages; all features where shoulderband snail species have been documented in the literature. In addition, these areas support a variety of vegetation communities and provide large areas of open space that would allow for gene flow between watersheds or populations. This set-aside will also help mitigate long-term secondary effects by providing adequate protected open space away from the edge of development. Several specific mitigation measures will also be implemented to control human activities in open space areas, including restrictions on recreational activities and homeowner education. Pet, stray, and feral cats and dogs will be leashed or otherwise controlled in or adjacent to open space areas. Pest management activities will be controlled through an integrated pest management (IPM) plan and Argentine ant monitoring and controls will be implemented. Implementation of these measures will allow Trask shoulderband snail to persist on site after development in the large amount of permanent open space that will be protected and managed.

In addition to these measures reducing impacts to this species at the project level, this species appears to have a broad geographic range, is likely to occur in suitable microhabitats within the watershed, and much of the watershed consists of National Forest system lands and other designated public ownership lands.

For the reasons set forth above, the proposed Landmark Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable microhabitats; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Reptile – Low Mobility. This guild includes coastal western whiptail, rosy boa, and San Bernardino ringneck snake.

The coastal western whiptail was observed on site in the High Country SMA (Dudek and Associates 2006) and off site in Castaic Mesa (Compliance Biology 2006), but was not observed in pitfall trapping (Impact Sciences 2006). There is only one other documented occurrence for the SCRW in the CNDDDB south of Soledad Canyon Road. However, this species has only been tracked in the CNDDDB in recent years, with the oldest occurrence in Ventura and Los Angeles counties dating back to 1993. This species is common observed by biologists in suitable habitat in southern California and it is expected to be relatively common in suitable habitat in the SCRW.

The San Bernardino ringneck snake and rosy boa have not been observed in the RMDP/SCP project area and there are no documented occurrences in the CNDDDB for these species. While not commonly observed

is known to occur within National Forest system lands that would not be subject to the same level of impact associated with present and reasonably foreseeable projects on private lands in the SCRW. Impacts to this species would not be cumulatively significant because of this species' widespread distribution within the watershed and its range.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed RMDP/SCP project, also could result in potential long-term secondary effects, including the introduction of non-native, invasive plant species; hydrologic alterations and water quality impacts; and increased human activity, trampling, and soil compaction. Impacts to this species would not be cumulatively significant because of this species' widespread distribution within its watershed and its range.

e. Summary of Cumulative Impacts to Biological Resources

Based on the preceding discussion, the cumulative impact analysis for biological resources resulted in ~~four~~ three different cumulative impact determinations:

1. ~~The contribution of the proposed RMDP/SCP, including the Landmark Village project, to a potential cumulative impact in the watershed resulting from present and reasonably foreseeable projects would be cumulatively considerable and unavoidable, even after considering mitigation required by the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended in this EIR. No feasible additional mitigation measures can be identified that would reduce the considerable contribution to a potential significant impact to a level less than cumulatively considerable under this alternative. Reasons for these significant unavoidable impacts include:~~
 - ~~(a) extensive loss and fragmentation of the resource within the Santa Clara River watershed; and~~
 - ~~(b) substantial on-site habitat loss and fragmentation of a resource with a very limited distribution on site and/or geographic range.~~
- 2.—The contribution of the proposed RMDP/SCP, including the Landmark Village project, to a potential cumulative impact in the watershed resulting from present and reasonably foreseeable projects, could be cumulatively considerable, absent mitigation. Implementation of the mitigation measures required by both the Newhall Ranch Specific Plan Program EIR and this EIR would reduce the contribution of the proposed RMDP/SCP, including the Landmark Village project, to cumulative impacts to a level less than cumulatively considerable.
23. The contribution of the proposed RMDP/SCP, including the Landmark Village project, to a potential cumulative impact in the watershed resulting from present and foreseeable projects, would not be cumulatively considerable. This determination was made where the resource affected by the proposed RMDP/SCP project comprises a very small proportion of the resource impacts in the watershed.

34. Past, present, and reasonably foreseeable projects, including the proposed RMDP/SCP project and Landmark Village, do not result in potential significant watershed-level impacts. This determination was made when the resource is still common to abundance in its geographic range and/or substantial habitat for the species would remain in the watershed.

~~Table 4.4-28 provides a summary of the Landmark Village project's contribution to cumulative impacts determinations for biological resources.~~

Table 4.4-28
Summary of Cumulative Impact Determinations for Biological Resources

Cumulative Impact Determination	Biological Resource	Project's Contribution-Cumulatively Considerable After Mitigation
Contribution of Landmark Village to potential cumulative impact would be cumulatively considerable; significant and unavoidable	Vegetation Communities coastal scrub communities – extensive loss and fragmentation in the Santa Clara River watershed	Yes

~~There was one significant, cumulatively considerable and unavoidable impact for the Landmark Village project: impacts to coastal scrub communities. Impacts would be cumulatively considerable, absent mitigation, for a majority of other the biological resources, including vegetation communities other than coastal scrub; common wildlife as a whole; most of the federally and state-listed threatened and endangered and all California Fully Protected species; wildlife habitat linkages, corridors, and crossings; most California Species of Special Concern; many California Special Animals, Watch List species, Specially Protected Mammals, and CDFG Trust Resources; and three special-status plants. The mitigation measures required by both the Newhall Ranch Specific Plan Program EIR and this EIR (Subsection 4.4.10, Project Mitigation Measures) would reduce impacts to these resources to a level less than cumulatively considerable. To offset loss vegetation communities and habitat for species, these mitigation measures generally include the dedication and maintenance of existing natural lands in the Open Area, River Corridor SMA/SEA 23, High Country SMA/SEA 20, and Salt Creek area, totaling approximately 9,753 acres. For riparian resources, these measures include replacing the functions and services of riparian communities that may be lost through construction. For both wildlife and plant species, mitigation includes measures to control for long-term secondary effects, including controls on public access to dedicated open space areas; controls on pet, stray, and feral cats and dogs; termination of grazing activities (except for the purpose of resource management); controls on invasive plant and animal species (including Argentine ants, brown-headed cowbirds, bullfrogs, African clawed frogs, and crayfish); controls on pesticides (including rodenticides); controls on hydrological alterations and water quality; and controls on nighttime lighting; fencing and signage; and homeowner education about sensitive resources.~~

It was determined that the contribution of the proposed RMDP/SCP, including the Landmark Village project, to potential significant cumulative impacts at the watershed level would not be cumulatively considerable for most special-status biological resources, including southern steelhead and several special-status plants. In addition, it was determined that significant cumulative impacts to a majority of wildlife and plant species at the watershed level would not occur. Although the contribution of the proposed RMDP/SCP, including the Landmark Village project, would not be cumulatively considerable in these cases, the mitigation measures described above would reduce on site impacts to these resources.

In summary, although the proposed RMDP/SCP, including the Landmark Village project, would include significant impacts to biological resources absent mitigation, the mitigation measures required by both the Newhall Ranch Specific Plan Program EIR and recommended by this EIR would ~~avoid, substantially lessen, or mitigate~~ reduce these impacts to below a level of significance. ~~However, the proposed Landmark Village project, in combination with other past, present and reasonably foreseeable projects within the SCRW, would result in significant cumulative impacts to one biological resource/coastal scrub. Despite mitigation, the proposed Landmark Village project would result in a cumulatively considerable contribution to significant impacts on the coastal scrub community that cannot be avoided, substantially lessen, or mitigated to below a level of significance.~~

12. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project Impacts

The proposed project would not result in significant unavoidable impacts.

b. Cumulative Impacts

The proposed Landmark Village project would contribute toward the cumulative impacts to biological resources. These impacts, however, can be reduced to less than significant levels through mitigation. ~~Specifically, in the absence of mitigation, the project's contribution toward the cumulative impacts to coastal scrub would be significant. Even with implementation of the following mitigation measures, the proposed project's contribution to cumulative impacts to coastal scrub would remain significant:~~

- ~~Mitigation Measures SP 4.6-37 through SP 4.6-42 (which would protect 1,311 acres of coastal scrub in the High Country SMA/SEA 20);~~
- ~~Mitigation Measure LV 4.4-2 (preservation of 156.5 acres of coastal scrub off site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Landmark Village); and~~

- ~~Protection of the Salt Creek Area (which contains 631 acres of this habitat type).~~

~~In the case of coastal scrub, no feasible additional mitigation measures applicable to Landmark Village could be identified that would reduce the significant impact to a less than cumulatively considerable level. Reasons for these unavoidable impacts include:~~

- ~~(a) — extensive loss and fragmentation of the resource rangewide; and~~
- ~~(b) — substantial on site habitat loss and fragmentation of a resource with a very limited distribution on site and/or geographic range.~~

meet the requirements of flood control while maintaining the natural resources within the Santa Clara River. Traditional flood control techniques in use within Los Angeles County rely upon reinforced concrete or grouted rock rip-rap to minimize erosion while maximizing the volume of flood flows carried by the drainage. While exceedingly efficient as a flood control technique, this approach retains none of the natural resource value.

In contrast, the drainage plan for the project provides drainage and flood control protection to developed uses while preserving the river as a natural resource. **Figure 4.5-5, Bank Stabilization – Typical Cross Section**, depicts typical cross sections for the buried bank stabilization concept. As shown, this approach uses soil cement that is buried beneath the existing banks of the river. Disturbed areas are then revegetated with native plant species maintaining the natural habitat presently found along the river.

~~A total of approximately 11,000 LF of bank stabilization will be constructed on the north side of the river plus an additional 6,400 LF of stabilization would be constructed on the south side. In total approximately 18,600 LF would be provided with bank stabilization. Refer to **Figure 4.5-6, Location of Long Canyon Road Bridge and Proposed Bank Stabilization Locations**, for a graphic depiction of the location of buried bank stabilization. Soil cement is used to protect residential and commercial development and the Long Canyon Road Bridge. The soil cement is primarily necessary to protect the proposed residential and commercial development on the project site, the Long Canyon Road Bridge, and the property immediately downstream of the project site from potential erosion due to project implementation. In addition 6,600 linear feet of TRMs (or other non hardened bank protection methods) would be installed downstream of the project site along the northern edge of the river corridor to protect the utility corridor from Chiquito Canyon to San Martinez Grande Canyon. An additional approximately 1,200 LF of soil cement bank stabilization is located downstream of the project site, and is designed to protect the WRP. The bank stabilization related to the WRP was approved and analyzed at a project level in the Newhall Ranch Specific Plan Program EIR. Locations where grouted rip rap or reinforced concrete would be used are limited to outlet structures, access ramps, or bridge abutments.~~

(Revised) Figure 4.5-6, Location of Long Canyon Road Bridge and Proposed Bank Stabilization Locations, graphically illustrates the location of both the soil cement bank stabilization and the utility corridor bank stabilization within the Landmark Village project site. (See also **(New) Figure 1.0-23a** for the location of an additional approximately 2,000 linear feet of utility corridor bank stabilization to be installed between the Santa Clara River and The Old Road, north of the existing Valencia WRP in the vicinity of the Round Mountain water tank site.)

In total, approximately 18,600 linear feet (LF) of soil cement bank stabilization would be provided. The 18,600 LF of soil cement bank stabilization includes the following: (a) approximately 11,000 LF side of the

Santa Clara River; (b) approximately 1,200 LF located on the north side of the river downstream of San Martinez Grande Canyon to protect the utility corridor leading to the previously approved Newhall Ranch Water Reclamation Plant (WRP); and (c) approximately 6,400 LF on the south side of the river, extending both east and west of the Long Canyon Road Bridge. This soil cement bank stabilization would be installed to the protect proposed project from flooding/erosion.

In addition to the approximately 18,600 LF of soil cement bank stabilization, the project proposes approximately 6,600 LF of utility corridor bank stabilization. The approximately 6,600 LF of utility corridor bank stabilization would consist of turf reinforcement mats (TRMs) or other non-hardened bank protection methods. It would be installed downstream of the Landmark Village tract map site along the north side of the river, starting from Chiquito Canyon and extending to San Martinez Grande Canyon. This utility corridor bank stabilization would be installed to protect the utility corridor from flooding/erosion.

The drainage plan utilizes several criteria that are to be implemented by projects that develop within the Specific Plan area. The primary criteria used to design the Landmark Village Drainage Concept and the discussion of how the Landmark Village Drainage Concept compares to these criteria is provided below:

- **Flood corridor must allow for the passage of Los Angeles County capital flood flow without the permanent removal of natural river vegetation (except at bridge crossings).** The Landmark Village EIR Section 4.4, *Biota*, discusses impacts to riparian plant communities in detail.
- **The banks of the river will generally be established outside of the “waters of the United States” as defined by federal laws and regulations and as determined by the delineation completed by the ACOE in August 1993.** As illustrated on Figure 4.5-6, the proposed bank stabilization locations along the main stem of the Santa Clara River are predominantly located outside of the ACOE jurisdiction. The entire Landmark Village project, inclusive of the utility corridor and borrow site, would permanently impact approximately 0.78 acres of land under ACOE jurisdiction within the Santa Clara River, as well as 0.60 acres of tributaries to the Santa Clara River. The Newhall Ranch Specific Plan Program EIR contemplated this impact.
- **Where the ACOE delineation width is insufficient to contain the capital flood flow, the flood corridor will be widened by an amount sufficient to carry the capital flood flow without the necessity of permanently removing vegetation or significantly increasing velocity.** The Landmark Village Drainage Concept proposes soil cement on the north side of the river near the confluence with Castaic Creek on agricultural land, north of the existing riparian river corridor. The land located between the existing river corridor and the newly created stabilized bank would be excavated to widen the existing channel, which would increase the area available within the channel and increase the capacity of the river to convey the passage of flood flows.
- **Soil cement would occur only where necessary to protect against erosion adjacent to the proposed development. Where existing bluffs are determined to be stable and there is no adjacent proposed development, no bank protection will be built.** In total, approximately 63 percent of the river corridor would be protected with flood protection improvements, while 37 percent of the corridor

- would remain in a natural state. Approximately 76 percent of the area proposed for flood control protection improvements would consist of buried bank protection. Approximately 20 percent would consist of TRMs, while roughly 4 percent would consist of rip-rap or reinforced concrete.

Installation of soil cement in the vicinity of the approved Newhall Ranch WRP would likely be installed prior to implementation of the project, and impacts of this action were previously evaluated at the project level in the certified Newhall Ranch Specific Plan Program EIR.

b. On-Site Drainage Control

At project buildout, runoff from the six drainage areas that drain through or onto the project site, as defined by the Psomas *Landmark Village Drainage Concept Report* (March 14, 2005), would continue to flow through the project site to the river. Runoff from the developed portions of the project would be channeled through the proposed storm water conveyance system and discharged to the river after passing through various debris and water quality basins. As required in the Los Angeles County Department of Public Works memorandum entitled, "Level of Flood Protection and Drainage Protection Standards," all on-site drainage systems carrying runoff from developed areas are to be designed for the 25-year design storm (urban flood), while storm drains under major and secondary highways, open channels (main channels), debris carrying systems, and sumps are to be designed for the capital flood.

Runoff from the developed portions of the project would be conveyed through the project site using a combination of storm drains, vegetated swales, catch basins, retention/detention basins, water quality basins, outlet structures, and debris basins.

1. SUMMARY

This section presents an analysis of the impacts of the proposed project relative to traffic/access and replaces the prior version of Section 4.7, Traffic/Access, of the Landmark Village Draft EIR. The analysis presented here is based upon the following traffic reports prepared for the proposed Landmark Village project by Austin-Foust Associates, Inc. Copies of each of the following documents are included in Recirculated Draft EIR **Appendix 4.7** of ~~this Recirculated EIR~~, or Revised Final EIR **Appendix F4.7** as noted.

- River Village Traffic Impact Analysis, Austin-Foust Associates, September 2004
- SR-126 Traffic Analysis for Community of Piru in Ventura County, Austin-Foust Associates, April 11, 2006
- Newhall Ranch Traffic Analysis Fillmore Traffic Impacts, Austin-Foust Associates, April 11, 2006
- ICU Worksheet for 2006 Volumes, Austin-Foust Associates
- Landmark Village Fire Station memorandum, Austin-Foust Associates, August 8, 2006
- Westside Santa Clarita Valley Roadway Phasing Analysis, Austin-Foust Associates, November 2006
- Landmark Village - Phase 1 Access and School Access memorandum, Austin-Foust Associates, June 29, 2007
- I-5 PA & ED HOV + Truck Lanes - SR-14 to Parker Road Traffic Study, Austin-Foust Associates, October 30, 2007
- Landmark Village Long-Range Cumulative (Buildout) Conditions Traffic Forecasts, Austin-Foust Associates, December 4, 2007
- Landmark Village Final Trip Generation memorandum, Austin-Foust Associates, November 11, 2009
- SR-126 Traffic Growth Rates (2003-2008) memorandum, Austin-Foust Associates, November 16, 2009
- Potrero Canyon Road Bridge, Austin-Foust Associates, July 1, 2010 (Appendix F4.7)
- Landmark Village Traffic Impact Analysis - Supplemental Freeway Analysis, Austin-Foust Associates, June 9, 2011 (Appendix F4.7);
- River Village (Landmark Village) Traffic Impact Analysis - Additional Existing Plus Project Scenario Analysis, Austin-Foust Associates, June 16, 2011 (Appendix F4.7)
- Department of Public Works letter regarding River Village Traffic Impact Analysis, December 9, 2004
- Department of Public Works letter regarding Landmark Village Phase 1 Access and School Access Memo, September 5, 2007
- Citywide Traffic and Circulation Impact Study, WILLDAN, August 2002
- Settlement and Mutual Release, City of Fillmore and Newhall Land and Farming Company, February 24, 2000

Project Buildout with Related Projects

- *I-5 Southbound Ramps/SR-126*
- *I-5 Northbound Ramps/SR-126*
- *Wolcott/SR-126*
- *Chiquito-Long Canyon/SR-126*

Long Range Cumulative Forecast

- *I-5 between Rye Canyon Road and Magic Mountain Parkway*
- *I-5 between Magic Mountain Parkway and Valencia Boulevard*
- *I-5 between Valencia Boulevard and McBean Parkway*
- *I-5 between Pico Canyon Road/Lyons Avenue and Calgrove Avenue*

In addition, buildout of the entire Newhall Ranch Specific Plan would contribute to potentially significant cumulative impacts at the following SR-126 intersections in the community of Piru and City of Fillmore in Ventura County:

- *Center Street and Telegraph Road (SR-126)*
- *E Street and Ventura Street (SR-126)*
- *El Dorado Road and Ventura Street*

Identified mitigation measures would reduce the project's contribution to the cumulative impacts in Los Angeles County to a level below significant. Mitigation measures also are proposed that would reduce the Specific Plan buildout traffic's contribution to potentially significant cumulative impacts at SR-126 intersections in Piru and Fillmore in Ventura County to a level below significant.

Under existing plus project conditions, which is a hypothetical scenario that assumes immediate full project buildout and does not account for cumulative traffic growth and future roadway improvements and, therefore, is presented for information purposes only, the project would result in significant impacts at the following intersections and freeway segments:

- I-5 Northbound Ramps & SR-126 [impacts mitigated by EIR mitigation]
- Wolcott & SR-126 [impacts mitigated by EIR mitigation]
- Commerce Center Drive & SR-126 [impacts mitigated by EIR mitigation]
- Chiquito Canyon/Long Canyon Road & SR-126 [impacts mitigated by EIR mitigation]
- Southbound I-5 between Calgrove & SR-14 (Caltrans) [impacts mitigated by I-5 Improvement Project]

As noted, the impacts identified under this scenario would be mitigated to a level below significant with implementation of EIR mitigation improvements, or improvements presently being implemented.

2. BACKGROUND

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.8 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with Traffic/Access for the entire Newhall Ranch Specific Plan. The County, in its findings and in a revised Mitigation Monitoring Plan, adopted the Newhall Ranch mitigation program for the Specific Plan. The Newhall Ranch Specific Plan Program EIR concluded that Specific Plan implementation would result in significant impacts, but that

Project	Description	Status/Occupancy Estimate ²
Westridge (including TR 45433 & PM 19050)	1,515 DU Residential 192 TSF Commercial Retail 460 STU Elementary School 208 AC Golf Course	Approved & Construction Completed
Valencia Industrial Center/Centerpoint	1,006.55 TSF Industrial Park 150 TSF Commercial Retail	Approved/2004-2010
TR 52584	216 DU Residential 18 Hole Golf Course	Approved/2009
TR 52475	63 DU Residential	Pending/2009
TR 60319 (Tincher)	36 Multi-Family Dwelling Units	Pending/2009
Tourney North	450 TSF Office	Approved and Construction Completed
Tourney South	165 TSF Office	Approved and Construction Completed
Legacy (Rye Cyn) Business Park	4,016 TSF Industrial Park (including existing) 134 TSF Walmart	Approved/2003-2014

Source: Austin-Foust Associates (September 2004) (see Recirculated Draft EIR **Appendix 4.7**), as revised by personal communication (August 2008).

SF = single family; MF = multi-family; TSF = thousand square feet; STU = student; AC = acre; FAR = floor-area ratio; DU = dwelling units

In addition to the above analyses, an existing plus project analysis was conducted, which does not account for ambient growth, related projects, or any cumulative development. As further explained below, this scenario is hypothetical and, as such, the analysis is presented for information purposes only.

c. Levels of Service Descriptions

Level of service (LOS) is a concept developed to quantify the degree of comfort afforded to drivers as they travel on a given roadway. The degree of comfort includes such elements as travel time, number of stops, total amount of stopped delay, etc. As defined in the Transportation Research Board, National Research Council's *Highway Capacity Manual* (HCM 2000), six grades are used to denote the various LOS and are denoted A through F. **Table 4.7-5, Level of Service of Arterial Roads**, and **Table 4.7-6, Level of Service Description – Freeway Segments**, describes the six grades of LOS for these respective facilities. Please refer to **Subsection 6, Performance Criteria/Significance Thresholds**, for the specific methods of calculating LOS for arterial roads and freeways in the project study area.

determines LOS from the average control delay per vehicle during the peak hours and in this way is different from the County's ICU methodology that determines LOS from percent of used capacity.

c. Existing Transit Service

The project study area is served by two major transit carriers: the Santa Clarita Transit (SCT) system operated by the City of Santa Clarita and Metrolink operated by the Southern California Regional Rail Authority (SCRRA). The SCT largely serves the Santa Clarita Valley, while Metrolink currently serves Ventura, Los Angeles, San Bernardino, Riverside, Orange, and San Diego Counties.

Santa Clarita Transit currently operates one fixed-route transit line (Route 2), which provides service near to the project site. The route passes the project site via SR-126 and provides service to the Newhall Metrolink station, the Valencia Industrial and Commerce Centers, and the Valencia Town Center area. ~~Buses run every 30 minutes.~~ Route 2 buses pass adjacent to the project site via SR-126 approximately once each hour. Route 2 connects with other bus routes at McBean Transfer Station, and connects with commuter trains at the Jan Heidt Metrolink Station in Newhall. Major destinations along Route 2 are ~~Soledad Entertainment Center, Newhall, Newhall Metrolink Station, City of Santa Clarita City Hall, Library and Courthouse,~~ Valencia Town Center, Valencia Industrial Center, Valencia Commerce Center, and Val Verde.

It can be anticipated that, over time, the local bus service will expand as additional development occurs within the valley. Typically, bus route plans are evaluated on an annual basis, and routes are added and/or modified as appropriate and as funding permits; therefore, as Landmark Village develops, service to the project area would be added accordingly at the discretion of SCT. Meanwhile, the current transit arrangement is anticipated to continue to serve local residents of the area, connecting residential areas with employment and commercial centers.

SCT commuter buses provide regional service to downtown Los Angeles, the San Fernando Valley and the Antelope Valley. Specifically, commuter bus service is provided to the following locations: North Hollywood Station (Metro Red Line and Orange Line Light Rail) (Route 757); ~~Olive View Medical Center in Sylmar (Route 790),~~ Chatsworth Metrolink/Amtrak Station, Canoga Park, – Warner Center (Routes 791/796), UCLA/Westwood – Century City (Routes 792 and 797), Van Nuys – Sherman Oaks (Routes 793 and 798), Burbank Metrolink and Los Angeles Union Station/Gateway Transit Center (Route 794), Antelope Valley (Route 795), ~~Vincent Grade/Acton Metrolink Station and Lancaster Metrolink Station (Route 795), Warner Center (Route 796),~~ and downtown Los Angeles–7th and Spring Streets (Route 799). The commuter buses can be accessed from the Landmark Village site at the McBean Regional Transit Center via Local Route 2.

Center Street and Telegraph Road results in a LOS C in the AM peak hour and LOS D in the PM peak hour (note that the delay is calculated only for the southbound approach since traffic on Telegraph Road is uncontrolled).

6. PROPOSED PROJECT IMPROVEMENTS

a. Site Access and Proposed Improvements

The Landmark Village project-level circulation system is intended to be consistent with, and implement, the mobility objectives of the Specific Plan's approved Master Circulation Plan. The Newhall Ranch Specific Plan designates Long Canyon Road as a six lane Major Arterial Highway for the segment that passes through the project site. Chiquito Canyon Road is designated as a Limited Secondary Arterial Highway from SR-126 through the Specific Plan area. The Specific Plan designates A Street through the Landmark Village project site as a four-lane Secondary Highway.

All roadways within Landmark Village would be constructed in substantial conformance with the requirements of the Specific Plan and, in many cases, would require only minor project-specific modification to the street sections set forth in the Los Angeles County Subdivision Code. The one change from the Specific Plan's Master Circulation Plan would be the project applicant's request to revise the A Street classification from a four-lane Secondary Highway to a two-lane Collector Street. The Secondary Highway designation is also included in the County's Master Plan of Highways and the Santa Clarita Valley Areawide Plan's Circulation Plan.

The project circulation plan is characterized by a system of local streets with access to and from a curvilinear road (A Street) that traverses the site in an east/west direction. Two north/south roadways, Wolcott Road and Long Canyon Road, would connect A Street to the off-site highway system (SR-126). The primary function of A Street is to provide connectivity between the Landmark Village neighborhoods and access from local streets to the arterial highway system. A Street also would provide access to the proposed elementary school. (Additional details regarding elementary school access is provided in Subsection 1.(4).) The proposed project would construct temporary intersections with SR-126, which would be consistent with the project's planned potential future grade separated crossings for Wolcott Road/SR-126 and Long Canyon Road/SR-126.

The project will also construct a fire station, located west of Long Canyon Road. The applicant and the Fire Department have agreed to locating a fire station within the Landmark Village Project, as shown on **Figure 4.14-2, Proposed Fire Station Locations**. Relative to the analysis of traffic impacts, shift change occurs once a day. Station personnel will average 1 to 2 ancillary trips daily. The number of responses from the fire station is projected to be 4 to 5 a day. The traffic impacts of locating a fire station on the site plan have been analyzed in a technical memorandum found in Recirculated Draft EIR **Appendix 4.7**.

The project applicant is also proposing to construct the Long Canyon Road Bridge component of the Specific Plan, in conjunction with the Landmark Village project. The Long Canyon Road Bridge is one of the three bridge crossings over the Santa Clara River, and it would serve central portions of the Newhall Ranch Specific Plan. The new bridge would span the width of the Santa Clara River, equating to a roadway segment of approximately 1,100 feet in length and 100 feet in width. A six-lane highway would be constructed that extends from the proposed realignment of the existing Chiquito Canyon Road/SR-126 intersection in a southerly direction over the Santa Clara River to the proposed bridge terminus.

b. Expected Transit Usage

The mixed-use/commercial areas planned along Wolcott Road permit park-and-ride lots, and the project includes the construction of a park-and-ride lot. In addition, the mixed-use/ commercial area in the vicinity of Wolcott Road reserves a future transit station within the project site. Project residents and employees on the project site are expected to use these to access existing transit facilities in the project area and throughout the valley, as well as any additional transit service that may be expanded to the project area. As will be discussed below, buildout of the proposed project is forecast to generate 41,884 ADT. Of these trips, 2,052 total daily transit trips and approximately 200 peak hour transit trips are expected to be generated at Landmark Village buildout (see **Subsection 7.g., Congestion Management Plan**, below, for how these daily and peak hour transit trips were calculated). As discussed below in Section 7, Project Impacts, it is expected that this trip demand would be met by existing bus service along SR-126 with connections to other locations within the region, Metrolink, and other transit services that may be extended to the project site in the future.

7. PROJECT IMPACTS

a. Significance Threshold Criteria

Significance threshold criteria for traffic/access are specified in Appendix G of the *California Environmental Quality Act (CEQA) Guidelines*. A project would have a significant impact on traffic/access if it would:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections);
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for the designated roads or highways. Exceed, either individually or

~~cumulatively, a LOS standard established by the county congestion management agency for designated roads or highways;~~

- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks (addressed in the Project Initial Study);
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (addressed in the Project Initial Study);
- Result in inadequate emergency access (addressed in the Project Initial Study);
- ~~Result in inadequate parking capacity;~~⁷ or
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities supporting alternative transportation (e.g., bus turnouts, bicycle racks).⁸

In addition, Los Angeles County has established performance criteria that are utilized as significance thresholds for purposes of this impact analysis. In most traffic studies, performance criteria for arterial roads and intersections are based on two primary measures. The first is “capacity,” which establishes the vehicle carrying ability of a roadway and the second is “volume.” The volume measure is either a traffic count (in the case of existing volumes) or a forecast for a future point in time. The ratio between the volume and the capacity gives a volume-to-capacity (V/C) ratio and a corresponding LOS.

Table 4.7-11, Volume/Capacity Ratio Level of Service Ranges, summarizes the V/C ranges that correspond to LOS A through F for arterial roads and intersections. The V/C ranges are those used by the County of Los Angeles.

Los Angeles County utilizes both the V/C ratio and the LOS when determining impact significance. The county deems certain LOS values unacceptable and increases in the V/C ratio that cause or contribute to the LOS being unacceptable are defined as significant impacts.

Cumulative impacts on the I-5 freeway have been evaluated based on peak hour directional volumes, as required by the Los Angeles County Congestion Management Program (CMP), and calculated LOS based on volume-density (passenger cars per hour per lane) using the Highway Capacity Manual procedures for mainline freeway segment analysis, as recommended by Caltrans. Cumulative impacts on the I-5 freeway also were assessed utilizing V/C ratios, as required by the CMP. (See Revised Final EIR Appendix F4.7, Landmark Village Traffic Impact Analysis - Supplemental Freeway Analysis, AFA (June 9, 2011.)

⁷ The proposed project would provide parking consistent with the parking regulations set forth in Specific Plan, Section 3.7. Therefore, the project would provide adequate parking for the uses proposed under the Landmark Village tract map and no further analysis of parking capacity is necessary.

⁸ With respect to alternative transportation policies, plans and programs, this EIR, **Section 2.0, Environmental and Regulatory Setting**, analyzes the proposed project’s consistency with regional plans and policies, including SCAG’s Regional Mobility Element/Regional Transportation Plan, and the Congestion Management Program for Los Angeles County. The project is considered consistent with these adopted plans and programs. Therefore, no further analysis is necessary.

**Table 4.7-11
Volume/Capacity Ratio Level of Service Ranges**

V/C Ratio Range	LOS
<i>Arterial Roads/Intersections</i>	
0.00 – 0.60	A
0.61 – 0.70	B
0.71 – 0.80	C
0.81 – 0.90	D
0.91 – 1.00	E
Above 1.00	F

Source: Austin-Foust Associates (September 2004).

The following outlines the impact criteria for the facilities within the project study area.

(1) Arterial Roads

The ICU calculation methodology and associated impact criteria proposed for the project study area arterial system are summarized in **Table 4.7-12, Arterial Intersection Performance Criteria**. The county strives to maintain LOS C (ICU not to exceed 0.80) at existing intersections and utilizes LOS D (ICU not to exceed 0.90) as the accepted standard and target LOS for future intersections.

(2) State Highways

Since the project is located along a state highway, the methodology for determining intersection LOS that is preferred by Caltrans is also used as part of this study. This procedure determines intersection LOS from the average control delay per vehicle during the peak hours and in this way is different from the County's ICU methodology, which determines intersection LOS from percent of used capacity.

(3) Congestion Management Plan and Freeway Mainline Facilities

The CMP defines a significant impact as occurring when the proposed project increases traffic demand on a CMP facility by 2 percent or more of capacity ($V/C \geq 0.02$), causing or worsening LOS F ($V/C > 1.00$).⁹

⁹ The Caltrans Guide for the Preparation of Traffic Impact Studies does not identify a specific impact criteria due to differences between rural and urban areas of the State, as well as differences between the northern, central and southern regions. Accordingly, the local Caltrans districts determine the impact criteria based on the appropriate requirement of that district.

Table 4.7-19
ICU and LOS Summary – Traffic Conditions with Project Buildout and Related Projects

Intersection	No Project (Existing Plus Ambient)				Project Buildout Plus Related Projects				Increase	
	AM		PM		AM		PM		AM	PM
7. I-5 SB Ramps/SR-126	.54	A	.49	A	1.51	F	1.06	F	.97*	.57*
8. I-5 NB Ramps/SR-126	.52	A	.53	A	1.40	F	1.34	F	.88*	.81*
80. Wolcott/SR-126	.37	A	.47	A	.82	D	.90	D	.45*	.43*
81. Commerce Center/Henry Mayo**	--		--		.56	A	.41	A	--	--
82. Commerce Center/SR-126 EB**	--		--		.28	A	.21	A	--	--
83. Commerce Center/SR-126 WB**	--		--		.78	C	.64	B	--	--
94. Commerce Center/SR-126	.58	A	.77	C	--		--		--	--
96. San Martinez Canyon/SR-126	.34	A	.44	A	.57	A	.52	A	.23	.08
110. Chiquito-Long Canyon/SR-126	.40	A	.48	A	1.07	F	.81	D	.67*	.33*

Source: Austin-Foust Associates (September 2004).

*Significant Project Impact

**New Intersection

Level of service ranges:

.00 – .60	A
.61 – .70	B
.71 – .80	C
.81 – .90	D
.91 – 1.00	E
Above 1.00	F

(4) Existing plus Project Buildout

Under this scenario, the proposed project's buildout traffic volumes are added to the existing traffic volumes and roadway configuration, and impacts are assessed. This scenario is regarded by traffic engineers as a hypothetical scenario when used in connection with a development project such as the proposed Landmark Village project, which is not anticipated to reach full buildout until approximately 2014. The scenario is hypothetical because it assumes that the proposed project would be fully built out immediately and the corresponding full buildout traffic volumes added to existing roadway volumes and infrastructure. Thus, the existing plus project analysis presumes that the existing environment (existing traffic volumes, existing roadway infrastructure, and existing land uses) will not change over the long-term buildout of the project. As a result, future increases in traffic volumes attributable to other development projects (i.e., cumulative traffic volumes) are not accounted for in the analysis. This results in the analysis potentially understating project impacts because capacity that otherwise would be utilized by future development that precedes the proposed project is now available to the project. On the other

hand, because the scenario does not account for future planned roadway network improvements that would increase roadway capacities, the analysis potentially results in overstating project impacts. Furthermore, because the analysis does not take into account future development and related changing land uses, the analysis does not account for the corresponding change in trip distribution patterns that accompanies changing land uses, which could lead to overstating impacts in some circumstances, while understating them in others.

Notwithstanding, an existing plus project analysis was conducted and the results of the analysis are summarized below. (See Recirculated Draft EIR **Appendix 4.7**, River Village Traffic Impact Analysis (September 2004), AFA, Section 4.8, and Revised Final EIR **Appendix F4.7**, River Village (Landmark Village) Traffic Impact Analysis – Additional Existing Plus Project Scenario Analysis (June 16, 2011), AFA, for additional details, including ICU worksheets.) Because of the hypothetical nature of the scenario, the analysis presented below is provided for comparative purposes only; the proposed project's significance determinations and corresponding mitigation measures are based on the analysis presented under the following three scenarios: (1) Traffic Conditions with Project Buildout (existing plus ambient growth plus project); (2) Traffic Conditions with Project Buildout and Related Projects (existing plus ambient growth plus related projects plus project); and (3) Year 2030 Long-Range Cumulative Freeway Conditions.

Peak hour ICU values for existing conditions both with and without the proposed project are presented below in **Table 4.7-19B, ICU and LOS Summary – Existing Conditions With and Without Project**. The table provides a comparison between the existing without-project condition and with-project conditions. As shown on the table, under existing plus project conditions, the following intersections would be significantly impacted by the addition of project traffic:

8. I-5 NB Ramps & SR-126;

80. Wolcott & SR-126;

94. Commerce Center & SR-126; and

110. Chiquito Canyon/Long Canyon Road & SR-126

In comparison, under the Traffic Conditions with Project Buildout and Traffic Conditions with Project Buildout and Related Projects scenarios (pp. 4.7-49 to 4.7-51, supra), the proposed project would result in significant impacts to the above four intersections, as well as the following additional intersection:

7. I-5 SB Ramps & SR-126

Table 4.7-19B
ICU and LOS Summary – Existing Conditions With and Without Project

Intersection	Existing Conditions without Project				Existing Conditions with Project				Project Increment	
	AM		PM		AM		PM		AM	PM
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS		
7. I-5 SB Ramps & SR-126	.39	A	.36	A	.63	B	.52	A	.24	.16
8. I-5 NB Ramps & SR-126	.71	C	.77	C	1.15	F	1.18	F	.44	.41
80. Wolcott & SR-126	.34	A	.42	A	1.03	F	1.26	F	.69	.84
94. Commerce Center & SR-126	.52	A	.68	B	.88	D	.99	E	.36	.31
96. San Martinez Canyon & SR-126	.31	A	.40	A	.33	A	.43	A	.02	.03
110. Chiquito/Long Canyon & SR-126	.36	A	.43	A	1.05	F	1.31	F	.69	.88

Bold = Significant Impact

Level of service ranges: .00 - .60 A .71 - .80 C .91 - 1.00 E
.61 - .70 B .81 - .90 D Above 1.00 F

Roadway improvements that would mitigate the identified impacts are presented below in **Table 4.7-19C, Mitigation Measures for Project Intersection Impacts – Existing Conditions With Project**. Each of the recommended improvements is included in this EIR as mitigation either for the impacts identified under the Existing plus Ambient plus Project scenario, or under the Existing plus Ambient plus Project and Related Projects scenario. (See Section 8, Mitigation Measures LV 4.7-7, 4.7-10, 4.7-11, and 4.7-12.) **Table 4.7-19D, ICU and LOS Summary – With Mitigation**, summarizes the resulting ICUs and LOS with the mitigation in place.

Table 4.7-19C
Mitigation Measures for Project Intersection Impacts – Existing Conditions With Project

Location	Mitigation
8. I-5 NB Ramps & SR-126	Add 2 nd & 3 rd NBL, add 2 nd 3 rd & 4 th EBT, convert shared WBL/WBT lanes to 1 st & 2 nd dedicated WBT, and add 3 rd WBT & 1 st free flow WBR.
80. Wolcott & SR-126	Add 1 st NBL, add 2 nd & 3 rd NBR, convert shared SBL/SBT to dedicated SBT, add 2 nd SBL, add 2 nd EBL, add 3 rd EBT, add 1 st EBR, add 2 nd WBL, and add 3 rd WBT.
94. Commerce Center & SR-126	Construct Grade Separated Interchange
110. Chiquito/Long Canyon & SR-126	Add 1 st & 2 nd NBL, add 1 st & 2 nd NBR, add 2 nd NBT, add 1 st & 2 nd SBL, add 2 nd & 3 rd SBT, add 2 nd EBL, add 3 rd EBT, add 1 st EBR, add 1 st and 2 nd WBL, and add 3 rd WBT.

Table 4.7-19D
ICU and LOS Summary – With Mitigation

<u>Intersection</u>	<u>Existing Conditions without Project</u>				<u>Existing Conditions plus Project with Mitigation</u>				<u>Change</u>	
	<u>AM</u>		<u>PM</u>		<u>AM</u>		<u>PM</u>			
	<u>ICU</u>	<u>LOS</u>	<u>ICU</u>	<u>LOS</u>	<u>ICU</u>	<u>LOS</u>	<u>ICU</u>	<u>LOS</u>	<u>AM</u>	<u>PM</u>
<u>8. I-5 NB Ramps & SR-126</u>	<u>.71</u>	<u>C</u>	<u>.77</u>	<u>C</u>	<u>.48</u>	<u>A</u>	<u>.40</u>	<u>A</u>	<u>-.21</u>	<u>-.21</u>
<u>80. Wolcott & SR-126</u>	<u>.34</u>	<u>A</u>	<u>.42</u>	<u>A</u>	<u>.52</u>	<u>A</u>	<u>.64</u>	<u>B</u>	<u>.18</u>	<u>.22</u>
<u>94. Commerce Center & SR-126</u>	<u>.52</u>	<u>A</u>	<u>.68</u>	<u>B</u>	<u>n/a (Grade Separated Interchange)</u>					
<u>110. Chiquito/Long Canyon & SR-126</u>	<u>.36</u>	<u>A</u>	<u>.43</u>	<u>A</u>	<u>.51</u>	<u>A</u>	<u>.57</u>	<u>A</u>	<u>.15</u>	<u>.14</u>

Level of service ranges: .00 - .60 A .71 - .80 C .91 - 1.00 E
.61 - .70 B .81 - .90 D Above 1.00 F

In addition to an intersection level of analysis, an evaluation of the I-5 freeway under the existing plus project scenario was conducted. **Table 4.7-19E, Freeway Volumes and V/C Ratios - Existing plus Project Conditions**, depicts the results of the analysis, which determined that the southbound segment of I-5 between Calgrove & SR-14 would be significantly impacted by the project under this scenario. This freeway segment consists of a four-lane section of uphill grade that significantly reduces travel speed for the many heavy trucks that use this segment. The two right-most lanes are primarily utilized by the slow moving trucks, which reduces the overall capacity of this segment. As such, this segment experiences worse LOS than adjacent segments that carry similar volumes of traffic; the segment operates at LOS F (V/C 1.06) under existing (no-project) conditions.¹²

¹² Under the Existing Plus Project scenario, the project would add a greater volume of traffic to the I-5 freeway than it would under long-range cumulative conditions when the Newhall Ranch Specific Plan area (and adjacent development areas) is fully built out. The reason for this is that the built out Specific Plan area would include a significant amount of employment and commercial retail development that would serve as trip destinations for residents of the Landmark Village project, as well as other Specific Plan development. Likewise, the employment and commercial retail areas of the Landmark Village project will provide trip destinations for future residents of the Specific Plan area. As such, under Specific Plan build out conditions, Landmark Village would result in fewer project trips that leave the Santa Clarita Valley than under Existing Plus Project conditions, which translates to fewer project trips on the I-5 freeway. In this regard, the Existing Plus Project scenario overstates project impacts.

Table 4.7-19F
Freeway Volumes and V/C Ratios - Existing plus Project Conditions

Segment	Lanes	Capacity	Existing Without Project				Existing With Project				Project Increment		
			AM Pk Hr		PM Pk Hr		AM Pk Hr		PM Pk Hr		V/C	AM	PM
			Vol	V/C	Vol	V/C	Vol	V/C	Vol	V/C			
Northbound													
401.	North of Lake Hughes	8,000	1,200	.15	1,900	.24	1,229	.15	1,986	.25	.00	.01	
402.	Between Lake Hughes & Parker	8,000	1,300	.16	2,000	.25	1,330	.17	2,087	.26	.01	.01	
403.	Between Parker & Hasley Canyon	8,000	1,600	.20	2,000	.25	1,637	.20	2,109	.26	.00	.01	
404.	Between Hasley Canyon & SR-126	8,000	2,100	.26	2,500	.31	2,143	.27	2,626	.33	.01	.02	
405.	Between SR-126 & Rye Canyon	8,000	2,800	.35	3,100	.39	3,286	.41	3,411	.43	.06	.04	
406.	Between Rye Canyon & Magic Mtn	8,000	2,800	.35	3,100	.39	3,286	.41	3,411	.43	.06	.04	
407.	Between Magic Mtn & Valencia	8,000	4,200	.53	5,300	.66	4,589	.57	5,546	.69	.04	.03	
408.	Between Valencia & McBean	8,000	5,300	.66	6,100	.76	5,599	.70	6,287	.79	.04	.03	
409.	Between McBean & Pico/Lyons	8,000	5,600	.70	6,700	.84	5,825	.73	6,838	.85	.03	.01	
410.	Between Pico/Lyons & Calgrove	8,000	5,400	.68	7,200	.90	5,578	.70	7,307	.91	.02	.01	
411.	Between Calgrove & SR-14	8,000	5,400	.68	7,200	.90	5,574	.70	7,304	.91	.02	.01	
412.	South of SR-14	14,400	6,800	.47	13,700	.95	6,899	.48	13,759	.96	.01	.01	
Southbound													
401.	North of Lake Hughes	8,000	1,300	.16	1,700	.21	1,384	.17	1,742	.22	.01	.01	
402.	Between Lake Hughes & Parker	8,000	1,400	.18	1,900	.24	1,486	.19	1,943	.24	.01	.00	
403.	Between Parker & Hasley Canyon	8,000	1,600	.20	2,000	.25	1,707	.21	2,054	.26	.01	.01	
404.	Between Hasley Canyon & SR-126	8,000	1,900	.24	2,100	.26	2,024	.25	2,162	.27	.01	.01	
405.	Between SR-126 & Rye Canyon	8,000	2,400	.30	2,500	.31	2,640	.33	2,997	.37	.03	.06	
406.	Between Rye Canyon & Magic Mtn	8,000	4,200	.53	5,100	.64	4,448	.56	5,587	.70	.03	.06	
407.	Between Magic Mtn & Valencia	8,000	4,700	.59	5,800	.73	4,897	.61	6,182	.77	.02	.04	
408.	Between Valencia & McBean	8,000	5,700	.71	6,600	.83	5,850	.73	6,885	.86	.02	.03	
409.	Between McBean & Pico/Lyons	8,000	6,600	.83	7,200	.90	6,711	.84	7,405	.93	.01	.03	
410.	Between Pico/Lyons & Calgrove	8,000	7,000	.88	6,800	.85	7,086	.89	6,954	.87	.01	.02	
411.	Between Calgrove & SR-14	6,400	7,300	1.14	6,800	1.06	7,384	1.15	6,950	1.09	.01	.03	
412.	South of SR-14	12,400	14,100	1.14	9,400	.76	14,148	1.14	9,485	.76	.00	.00	

M = Mixed-Flow/General Purpose Lane (Capacity = 2,000 vehicles per hour)

M* = Mixed-Flow Lane on an Extended Uphill Grade, Without a Truck Lane (Capacity = 1,600 vehicles per hour)

T = Truck Lane (Capacity = 1,200 vehicles per hour)

Bold = Significant impact

Capacities derived from PeMS data and through discussions with Caltrans staff.

The improvement recommended to mitigate the identified impact is the addition of one truck lane in the southbound direction on the segment of I-5 between Calgrove Avenue and SR-14. This improvement will be constructed as part of the first phase of construction of the I-5 HOV (High Occupancy Vehicle) + Truck Lanes - SR-14 to Parker Road project ("I-5 Improvement Project"), which will add capacity to the I-5 by adding HOV and truck lanes. The first stage of improvements will include construction of a southbound truck lane between Calgrove Avenue & SR-14 (i.e., the recommended mitigation), which is expected to be completed in 2013, prior to buildout of the Landmark Village project. (See Section 9 for additional information regarding the I-5 Improvement Project.) As shown in Table 4.7-19F, Freeway Volumes and V/C Ratios - Existing + Project + Mitigation Conditions, the additional truck lane would fully mitigate the project's impacts. The project applicant will pay to Caltrans the project's share of the costs to implement the I-5 Improvement Project. (See Section 10, Cumulative Mitigation Measures.)

Table 4.7-19F
Freeway Volumes and V/C Ratios - Existing + Project + Mitigation Conditions

Segment	Existing Without Project				Existing + Project + Mitigation						Project Increment	
	AM Pk Hr		PM Pk Hr		Lanes	Capacity	AM Pk Hr		PM Pk Hr		AM	PM
	Vol	V/C	Vol	V/C			Vol	V/C	Vol	V/C		
Southbound												
411 Between Calgrove & SR-14	7,300	1.14	6,800	1.06	4M + 1T	9,200	7,384	.80	6,950	.76	-.34	-.30

M = Mixed-Flow/General Purpose Lane (Capacity = 2,000 vehicles per hour)

T = Truck Lane (Capacity = 1,200 vehicles per hour)

Capacities derived from PeMS data and through discussions with Caltrans staff.

h. Traffic Signal Warrant

A number of study locations either are or previously were stop sign controlled intersections. One of these, the I-5 northbound off-ramp at SR-126, recently was signalized as part of the current construction project at that location. Table 4.7-20, Traffic Signal Peak Hour Volume Warrant, summarizes peak hour forecast traffic volumes for the other locations (including applicable on-site intersections) and evaluates them using the Caltrans peak hour volume warrant. The peak hour volume warrant for rural areas (or major street speed of 40 miles per hour [mph] or greater) is illustrated in Figure 4.7-17, Peak hour Volume Signal Warrant – Rural, and the peak hour volume warrant for urban areas (or major street speed of 35 mph or less) is illustrated in Figure 4.7-18, Peak Hour Volume Signal Warrant – Urban. For on-site intersections the warrant analysis is performed only for the intersections that meet the minimum criteria of 100 vehicles per hour for side street volumes.

**Table 4.7-22
Freeway V/C and LOS Summary – CMP Monitoring Locations**

Location	Without Project				With Project			
	Capacity	Volume	V/C	LOS	Capacity	Volume	V/C	LOS
I. AM PEAK HOUR								
I-5 n/o SR-14, Northbound	10,000	9,000	.90	D	10,000	9,174	.92	D
II. PM PEAK HOUR								
I-5 n/o SR-14, Southbound	10,000	9,000	.90	D	10,000	9,150	.92	D

Source: Austin-Foust Associates (September 2004).

Source of Capacities LOS ranges: 201002 Los Angeles County CMP.

n/o = north of

Level of service ranges:	.00 – .35	A
	.36 – .54	B
	.55 – .77	C
	.78 – .93	D
	.94 – 1.00	E
	Above 1.00	F

(2) Project Transit Impacts

Another component of the CMP transportation impact analysis is a review of transit impacts. This review includes evidence that transit operators received the Notice of Preparation for this EIR (provided in Recirculated Draft EIR **Appendix ES**), estimation of the number of project trips assigned to transit, information on facilities and/or programs that would encourage public transit use, and an analysis of project impacts on transit service. Information on existing transit service to the project area was provided earlier in this EIR section.

Buildout of the Landmark Village project is forecast to generate 41,884 ADT (20,669 ADT for Phases 1 and 2 combined). To estimate the number of project trips that would use public transit, the number of project ADT is multiplied by an occupancy factor to determine total person trips, which is then multiplied by the applicable MTA factor. (MTA's factor is the most common and most reliable guideline used). The conversion to person trips is accomplished by using the MTA guidelines (multiplying the ADT by an occupancy factor of 1.4), which results in a total of 58,637 (28,935 for Phases 1 and 2 combined) average daily person trips. Applying the MTA's factor for converting total person trips to transit trips (.035) results in approximately 2,052 (1,013 for Phases 1 and 2 combined) total daily transit trips and approximately 200 (100 for Phases 1 and 2 combined) peak hour transit trips (based on the peak hour representing 10 percent of the total daily trips). Public transit facilities would be in place prior to Phase 3.

The County of Los Angeles does not have LOS standards for transit service that are applicable to future development, such as the proposed project; however, the substantial demand for transit service that would result from the Landmark Village project (2,052 total daily trips) has the potential to result in a significant impact to transit services. As previously noted, in accordance with Specific Plan approval, the project includes the construction of a park-and-ride lot, as well as the reservation of a right-of-way for future train service. Additionally, transit service is evaluated and funded on an as-needed basis. Coordination with the transit provider to identify appropriate bus stops and the payment of transit mitigation fees (adopted by SCT, MTA), as appropriate, would reduce the potential for transit-related impacts to a less than significant level. In this regard, to ensure that adequate transit capacity to serve the proposed project is available in the future, mitigation is proposed that requires the project applicant to pay applicable transit mitigation fees at the time of building permit issuance, unless the payment of such fees is modified by a transit mitigation agreement.

Metrolink, which is operated by the Southern California Regional Rail Authority (SCRAA), provides commuter rail service between the Antelope Valley and Downtown Los Angeles, and also links Ventura, Los Angeles, San Bernardino, Riverside, Orange, and San Diego counties with transfer service between the bus and rail systems. The closest Metrolink station to the project site (approximately 7 miles east) is located along Soledad Canyon Road east of Bouquet Canyon Road. Long-range plans as yet unspecified include an eventual Metrolink extension along the SR-126 corridor; land within Newhall Ranch is set aside for the Metrolink right-of-way, and a park-and-ride and/or train station.

With respect to bicycle and pedestrian facilities, the project has been designed for pedestrian connectivity and includes facilities for walking and bicycle use. The proposed project includes a hierarchy of community, local and other trails connecting to the Specific Plan's Regional River Trail, which traverse the Santa Clara River. The proposed project also includes 4.10 acres of community trails, which are unified pedestrian and bicycle routes (i.e., multi-use) in landscaped parkways, and are located along major roads in order to connect the Villages of the Specific Plan. For additional information regarding the pedestrian and bicycle facilities that would be provided as part of the project, please see EIR **Section 4.16, Parks and Recreation.**

In addition to the range of pedestrian and bicycle facilities that would be provided as part of the project, the proposed project would not conflict with the Metro Bicycle Transportation Strategic Plan to promote links between bicycle facilities and the transit network, including completion of the identified gaps in the inter-jurisdictional bikeway network.

j. State Highways

The project is located south of and adjacent to SR-126, which is a four-lane highway. Approximately 2 miles east of the project site is the I-5 Freeway which provides regional access for residents of the site.

The project site would obtain access from SR-126 via two existing intersections: Chiquito Canyon Road and Wolcott Way, each of which is to be supplemented with additional capacity to be constructed by the project.

The I-5/SR-126 interchange reconstruction project is substantially complete and, when fully completed, will accommodate the buildout traffic demands of the area. For example, traffic counts taken in April 2006 (post-SR-126/I-5 interchange improvements) indicate AM traffic volumes on the I-5 northbound off ramp at SR-126 are higher than the 2003 traffic counts used in the underlying traffic study (the PM peak hour counts taken in April 2006 are similar to the 2003 traffic counts used in the study). Level of service (LOS) at the intersection for post-construction conditions is better than the LOS in 2003 due to the significant amount of capacity that has been added by the interchange reconstruction project. **Table 4.7-23, Comparison of Traffic Volumes to LOS**, compares the traffic volumes and the LOS at this location for the conditions shown in the traffic study to the 2006 post-construction conditions. The table shows that LOS improves from LOS C to LOS A after construction. Since the traffic study did not assume the additional capacity from this construction project as part of the background conditions, the traffic study presents a worse-case scenario in comparison to what would be presented if the 2006 counts and the 2006 capacities were used.

In 2010 through 2012, approximately 1 mile west of the I-5/SR-126 interchange reconstruction project, a grade-separated interchange will be constructed at Commerce Center Drive and SR-126. This improvement replaces the existing at-grade intersection with a partial cloverleaf interchange designed to increase capacity and improve access to the Valencia Commerce Center area.

improvements for credit against or in lieu of paying the fee. (*This EIR, Section 4.7, provides the referenced transportation performance evaluation, including a determination of the improvements necessary to each off-site arterial, as well as appropriate fair-share funding requirements.*)

(3) I-5 and SR-126 in Los Angeles County

SP 4.8-7 Each future performance evaluation which shows that a future subdivision map will create significant impacts on SR-126 shall analyze the need for additional travel lanes on SR-126. If adequate lane capacity is not available at the time of subdivision, the applicant of the subdivision shall fund or construct the improvements necessary to serve the proposed increment of development. Construction or funding of any required facilities shall not preclude the applicant's ability to seek state, federal, or local funding for these facilities. (*The future performance evaluation presented in this EIR, Section 4.7, determined that the Landmark Village project would cause a significant impact at the SR-126/I-5 interchange at buildout and would be responsible for its fair share of the improvements to this interchange.*) (*This improvement has since been completed.*)

(4) Congestion Management Plan Mitigation

SP 4.8-8 Project-specific environmental analysis for future subdivision maps which allow construction shall comply with the requirements of the *Congestion Management Program* in effect at the time that subdivision map is filed. (*The future performance evaluation presented in this EIR, Section 4.7, complies with the requirements of the Congestion Management Program presently ~~used~~ in effect.*)

(5) SR-126 in Ventura County

SP 4.8-9 Prior to the recordation of the first subdivision map which permits construction, the applicant for that map shall prepare a transportation evaluation including all of the Specific Plan land uses which shall determine the specific improvements needed to the following intersections with SR-126 in the City of Fillmore and community of Piru in Ventura County: A, B, C, D and E Streets, Old Telegraph, Olive, Central, Santa Clara, Mountain View, El Dorado Road, and Pole Creek (Fillmore), and Main/Torrey and Center (Piru). The related costs of those intersection improvements and the project's fair share shall be estimated based upon the expected Specific Plan traffic volumes. The transportation performance evaluation shall be based on the *Los Angeles County Master Plan of Highways* in effect at that time and shall be approved by the Los Angeles County Department of Public Works. The applicant's total funding obligation shall be equitably distributed over the housing units and non-residential building square footage (i.e., Business Park, Visitor Center, Mixed Use, and Commercial) in the Specific Plan, and shall be a fee to be paid to the City of Fillmore and the County of Ventura at each building permit. (*This EIR, Section 4.7, in combination with the traffic reports presented in Recirculated Draft EIR Appendix 4.7, provides the required transportation evaluation of SR-126 intersections in Ventura County. As discussed in the EIR, Subsection 9.b.(3), buildout of the Newhall Ranch Specific Plan would contribute to potentially significant cumulative impacts at the intersection of Center Street and Telegraph Road (SR-126) in the Ventura County community of Piru. Pursuant to mitigation measure LV-4.7-224, below, the applicant will pay to Ventura County its fair-share*

of the costs to implement recommended roadway improvements at the Center Street/Telegraph Road intersection. Additionally, as discussed in the EIR, Subsection 9.b.(4), buildout of the Newhall Ranch Specific Plan would contribute to potentially significant cumulative impacts at two intersections in the Ventura County City of Fillmore. Pursuant to Mitigation Measure LV-4.7-21~~0~~, the applicant will pay \$300,000 to the City of Fillmore as its agreed-upon fair-share of the costs to construct transportation-related improvements deemed necessary by the City of Fillmore.)

(6) Freeway/Highway Intersections and Interchanges

- SP 4.8-10** The Specific Plan is responsible to construct or fund its fair-share of the intersections and interchange improvements indicated on Table 4.8-18 of the Newhall Ranch Specific Plan Final EIR. Each future transportation performance evaluation required by Mitigation 4.8-2 of the Newhall Ranch Specific Plan Final EIR which identifies a significant impact at these locations due to subdivision map-generated traffic shall address the need for additional capacity at each of these locations. If adequate capacity is not available at the time of subdivision map recordation, the performance evaluation shall determine the improvements necessary to carry Specific Plan generated traffic, as well as the fair share cost to construct such improvements. If the future subdivision is conditioned to construct a phase of improvements which results in an overpayment of the fair-share cost of the improvement, then an appropriate adjustment (offset) to the fees paid to Los Angeles County and/or City of Santa Clarita pursuant to Mitigation Measure 4.8-6 above shall be made. *(The transportation performance evaluation presented in this EIR, Section 4.7, fulfills the requirements of this Specific Plan mitigation measure relative to Landmark Village.)*
- SP 4.8-11** The applicant of the Newhall Ranch Specific Plan shall participate in an I-5 developer fee program, if adopted by the Board of Supervisors for the Santa Clarita Valley. *(The Board of Supervisors has not adopted a developer fee program for the Santa Clarita Valley. However, the applicant will participate in funding its fair share of mainline improvements in accordance with Mitigation Measures LV-4.7-17 through LV-4.7-20 and, to that end, the applicant and Caltrans have prepared a funding agreement under which the applicant will pay to Caltrans the project's share of the I-5 Improvement Project. See Final Revised EIR, Appendix F4.7.)*
- SP 4.8-12** The applicant of the Newhall Ranch Specific Plan shall participate in a transit fee program, if adopted for the entire Santa Clarita Valley by Los Angeles County and City of Santa Clarita. *(The applicant will be required to pay the applicable transit fees in place at the time of building permit issuance.)*
- SP 4.8-13** Prior to the approval of each subdivision map which permits construction, the applicant for that map shall prepare a traffic analysis approved by the Los Angeles County Department of Public Works. The analysis will assess project and cumulative development (including an existing plus cumulative development scenario under the County's Traffic Impact Analysis Report Guidelines (TIA) and its Development Monitoring System (DMS)). In response to the traffic analysis, the applicant may construct off-site traffic improvements for credit against, or in lieu of paying, the mitigation fees described in Mitigation Measure 4.8-6 of the Newhall Ranch Specific Plan Final EIR. If future subdivision maps are developed in phases, a traffic study for each phase of the subdivision map may be submitted to determine the improvements needed

to be constructed with that phase of development. *(The traffic analysis presented in this EIR, Section 4.7, fulfills the requirements of this Specific Plan mitigation measure.)*

b. Additional Mitigation Measures Proposed by this EIR

The following project-specific mitigation measures are recommended to mitigate the potentially significant traffic/access impacts that may occur with implementation of the Landmark Village project. These mitigation measures are in addition to those adopted in the certified Newhall Ranch Specific Plan Program EIR. To reflect that the measures relate specifically to the Landmark Village project, each measure is preceded by "LV," which stands for Landmark Village.

(1) On-Site Mitigation

LV 4.7-1 The project applicant shall construct all on-site local roadways and intersections to County of Los Angeles codes and regulations, unless provided otherwise on the Vesting Tentative Tract Map when approved.

LV 4.7-2 The main access for Landmark Village will be provided from SR-126 via the existing intersections of Wolcott Way and Chiquito Canyon Road. Future phases of the Newhall Ranch Specific Plan (NRSP) will provide access to and from Landmark Village via Long Canyon Road. Unless an updated long range study is prepared which demonstrates that the intersections will adequately handle the area build-out traffic as at grade intersections, adequate road right of way shall be reserved for future grade separated interchanges at these two locations, as approved in the NRSP.

(2) Off-Site Mitigation

When impacts occur solely due to the addition of project traffic or for when improvements are to provide access to the project site, the project is fully responsible for mitigation. For impacts that are the result of the cumulative effect of project traffic together with related project traffic, the project is responsible for a fair share cost of the mitigation (see Section 6.3 of the Austin-Foust report for the fair share calculations). In the event the project fully constructs at its own costs any of the mitigation improvements set forth below for which the project is responsible for less than a 100% share, the project shall be entitled to a credit in an amount equal to the cost to construct the improvement, less the project's proportionate share.

The County is in the process of forming a new Bridge & Thoroughfare (B&T) District, the Westside B&T District, which would encompass the Landmark Village site within its area of benefit, as well as other Westside development. Under the B&T District mechanism, the adoption of a specific area of benefit permits the County to levy a fee against future development located within the area of benefit for the improvement of arterial highways. This funding method assesses developments, which create the need for additional improvements, for the additional costs associated with constructing the necessary roadway

improvements. The charge is levied in proportion to the estimated number of trips generated by the development. Once the Westside B&T District is established, the payment of B&T fees by the Landmark Village project shall be in lieu of any remaining proportionate share due for those improvements located within the boundaries of the newly formed district.

The improvements identified for the I-5/SR-126 interchange are consistent with the improvements substantially completed to date at that location, and, when fully completed, represent the ultimate lane geometry determined in the Project Study Report for the interchange. The improvements identified for the Commerce Center Drive/SR-126 grade separated interchange also represent the configuration determined in that location's Project Study Report and which are currently in the Project Report process.

Under the analysis provided in **Subsection 7(f)**, the Commerce Center Drive/SR-126 intersection (Intersection 94) would experience a significant impact due to project generated traffic under the Phase 2 scenario (Phase 1 + Phase 2 traffic). Similarly, under the analysis provided in **Subsection 7(g)**, the Commerce Center Drive/SR-126 intersection would experience a significant impact due to project generated traffic under the Phase 3/Project Buildout scenario.

responsibility for the improvements identified in this mitigation measure is 62.1 percent [Phase 1, 12.2 percent; Phase 2, 19.3 percent; and, Project Buildout, 30.6 percent], with the exception of the third eastbound through lane required as part of improvement (ii); the project's fair-share for that improvement is 100 percent. This fair-share information is provided to facilitate any future action by the Project applicant to seek participatory funding from other development unrelated to the Landmark Village project.)¹⁴

LV 4.7-8

110. Chiquito Canyon/Long Canyon Road/SR-126 – Prior to exceeding occupancy of 1,444 dwelling units and 100,000 commercial square feet (or fewer dwelling units and a greater amount of commercial square feet, to be calculated based on a conversion factor of 2.5 dwelling units per thousand square feet of commercial space), the project applicant shall add: (i) a second northbound through lane, and a second northbound right turn lane (resulting in 1 northbound left turn lane, 2 northbound through lanes, and 2 northbound right turn lanes); (ii) convert the southbound shared through lane/right-turn lane to a southbound through lane and add a southbound right turn lane (resulting in 1 southbound left turn lane, 1 southbound through lane, and 1 southbound right turn lane); (iii) add an eastbound right turn lane (resulting in 1 eastbound left turn lane, 2 eastbound through lanes, and 1 eastbound right turn lane); and (iv) add a second westbound left turn lane (resulting in 2 westbound left turn lanes, 2 westbound through lanes, and 1 westbound right turn lane). Signals shall be modified to the satisfaction of the Department of Public Works. Alternatively, the project applicant shall construct a grade separated crossing to the satisfaction of the County of Los Angeles Department of Public Works. Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.

(d) Project Buildout (Phase 3) with Related Projects Mitigation Measures**LV 4.7-9**

7. I-5 SB Ramps/SR-126 – The project applicant shall fund its fair share of the cost to add: (i) a fourth southbound lane (resulting in 2 southbound left-turn lanes, 1 shared southbound left turn lane/southbound right turn lane, and 1 dedicated southbound right turn lane); (ii) a third and fourth eastbound through lane (resulting 4 four eastbound through lanes and 1 free flow eastbound right turn lane); and (iii) a fourth westbound through lane (resulting in 4 westbound through lanes and 1 free flow westbound right turn lane). Signals shall be modified to the satisfaction of the Department of Public Works. (Project share = 38.3 percent. The project ~~may elect to~~ shall pay by phase as each phase gets recorded: Phase I= 8.3 percent, Phase II= 8.1 percent and Phase III= 21.9 percent).¹⁵ Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. [This measure, with the exception of striping a fourth westbound through lane and striping a shared southbound left-turn/right-turn lane, has been completed.]

¹⁴ Percentage pro-rata calculation figures for this interchange were determined by the County of Los Angeles, Department of Public Works, written communication of December 9, 2004.

¹⁵ *Ibid.*

- LV 4.7-10** 8. I-5 NB Ramps/SR-126 –The project applicant shall fund its fair share of the cost to: (i) add a third northbound left turn lane (resulting in 3 northbound left turn lanes and 1 northbound right turn lane); (ii) add a third and fourth eastbound through lane (resulting in 4 eastbound through lanes and 1 free flow eastbound right turn lane); and (iii) add a third westbound through lane (for 3 westbound through lanes and 1 free flow westbound right turn lane). Signals shall be modified to the satisfaction of the Department of Public Works. (Project Share = 20.8 percent. The project ~~may elect to~~ shall pay by phase as each phase gets recorded: Phase I= 4.7 percent, Phase II= 4.0 percent and Phase III= 12.1 percent).¹⁶ Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. [*This measure has been completed.*]
- LV 4.7-11** 81, 82, 83 and 94. Commerce Center/SR-126 – The project applicant shall fund its fair share of the cost to construct a Grade Separated Interchange. (Project Share = 33.8 percent. The project ~~may elect to~~ shall pay by phase as each phase gets recorded: Phase I= 6.6 percent, Phase II= 9.1 percent and Phase III= 18.1 percent).¹⁷
- LV 4.7-12** 110. Chiquito Canyon/Long Canyon Road/SR-126 – The project applicant shall fund its fair share of the cost to add: (i) a second northbound left turn lane (resulting in 2 northbound left turn lanes, 2 northbound through lanes and 2 northbound right turn lanes); (ii) a second southbound left turn lane, and second and third southbound through lanes (resulting in 2 southbound left turn lanes, 3 southbound through lanes and 1 southbound right turn lane); (iii) a second eastbound left turn lane and a third eastbound through lane (resulting in 2 eastbound left turn lanes, 3 eastbound through lanes, and 1 eastbound right turn lane); and (iv) a third westbound through lane (resulting in 2 westbound left turn lanes, 3 westbound through lanes, and 1 westbound right turn lane) Alternatively, the project applicant shall construct a grade separated crossing to the satisfaction of the County of Los Angeles Department of Public Works (Project Share = 62 percent. The project ~~applicant may elect to~~ shall pay its fair-share by phase as each phase is recorded: Phase I= 3 percent, Phase II= 16 percent and Phase III= 43 percent)¹⁸. Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.

(d) Other Mitigation Measures

- LV 4.7-13** Applicable transit mitigation fees shall be paid by the project applicant at the time of building permit issuance, unless modified by an approved transit mitigation agreement.
- LV 4.7-14** Prior to the commencement of project construction activities, the applicant shall institute construction traffic management controls in accordance with the California Department of Transportation (Caltrans) traffic manual. These traffic management controls shall

¹⁶ *Ibid.*

¹⁷ *Ibid.*

¹⁸ *Ibid.*

I-5 Segment	AM Peak Hour						PM Peak Hour					
	Lanes	Capacity	Volume	V/C	Density	LOS	Lanes	Capacity	Volume	V/C	Density	LOS
Project Increment			-12	-.002					145	.020		
411. Calgrove to SR-14	4	7,200					4	7,200				
Without Project			7,428	1.032	>45.0	F			8,674	1.205	>45.0	F
With Project			7,400	1.028	>45.0	F			8,800	1.222	>45.0	F
Project Increment			-28	-.004					126	.017		

Notes: V/C = Volume to Capacity Ratio; D = Density (Passenger Cars Per Hour Per Lane); LOS = Level of Service; Capacities shown here are an estimate based on the LOS as calculated using the HCM volume-density methodology. Significant impacts are shown in bold.

Source: "I-5 PA&ED HOV & Truck Lanes – SR-14 to Parker Road Traffic Study," Austin-Foust Associates, Inc., October 2007.

The potential traffic impacts of the Landmark Village project also were analyzed as part of the larger Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan (RMDP/SCP) project. The RMDP/SCP project was evaluated in a joint Environmental Impact Statement/Environmental Impact Report (EIS/EIR; SCH No. 2000011025) prepared by the U.S. Army Corps of Engineers (Corps) and the California Department of Fish and Game (CDFG). The EIS/EIR analyzed the potential impacts associated with buildout of the Newhall Ranch Specific Plan, which includes Landmark Village, and the Valencia Commerce Center and Entrada developments. The EIS/EIR determined that the development facilitated by the RMDP/SCP project would result in potentially significant cumulative impacts to the nine segments of I-5 south of Parker Road and north of SR-14, and the EIS/EIR includes mitigation measures requiring that the project applicant contribute its fair-share towards the cost of adding high occupancy vehicle (HOV) and truck lanes to this segment of I-5. (See RMDP/SCP EIS/EIR Section 4.8, Traffic, Mitigation Measures TR-10 through TR-18. Relevant portions of RMDP/SCP EIS/EIR Section 4.8 are included in Revised Final EIR, **Appendix F4.7**.) Thus, as identified in the EIS/EIR, when Landmark Village traffic is considered as part of the larger volume of traffic that would be generated by the Newhall Ranch Specific Plan and other related Westside development (i.e., the RMDP/SCP project), the traffic generated by that larger project, in combination with cumulative development, would result in significant cumulative impacts to the entire length of I-5 between Parker Road and SR-14, not just the four segments that would be significantly cumulatively impacted when Landmark Village alone (as compared to the larger RMDP/SCP project) is considered as the project.

Caltrans recently completed a comprehensive traffic study that evaluates a planned improvement project for the I-5 freeway through the Santa Clarita Valley (I-5 Improvement Project).¹⁹ Caltrans presently is implementing the I-5 HOV + Truck Lanes - SR-14 to Parker Road project (I-5 Improvement Project), which The improvements will add capacity to the freeway by adding high occupancy vehicle (HOV) lanes and truck lanes. Caltrans certified the Final EIR and approved the I-5 Improvement Project in September 2009.²⁰ The environmental studies and preliminary engineering work for the improvements have been completed, and construction of the ~~truck lanes~~ first stage of improvements (Early Implementation Project) is expected to be completed in 2013, approximately 2015 while construction of the full project HOV lanes is expected to be completed in 2016, sometime thereafter. The improvements include the addition of one HOV lane in each direction between SR-14 and Parker Road, connecting to the HOV lanes currently under construction on the I-5 freeway south of the SR-14 freeway. Additionally, one truck lane is planned in the northbound direction between SR-14 and Calgrove Avenue, one southbound truck lane is planned between Pico Canyon Road/Lyons Avenue and Calgrove Avenue, and two southbound truck lanes are planned for the segment between Calgrove Avenue and SR-14. Each of these truck lanes will connect to the dedicated truck lanes that exist currently within the I-5/SR-14 freeway interchange. The Early Implementation Project consists of the northbound truck lane, the southbound truck lane between Pico Canyon Road/Lyons Avenue and Calgrove Avenue, and one of the southbound truck lanes between Calgrove Avenue and SR-14.

As mitigation for the significant cumulative impacts to the I-5 freeway identified above, the project will contribute its fair-share cost of the I-5 Improvement Project, ~~for~~ which includes those segments to which the project results in a significant impact. **Table 4.7-34, Landmark Village I-5 Share Summary**, illustrates the Landmark Village fair-share percentage relative to the total amount of future long-range cumulative traffic; the project trips shown represent the number of trips attributable to the project as determined by a nexus study of cumulative development. The table shows that the project's share at the significantly impacted locations ranges from 1.7 percent to 3.1 percent, with a weighted average share of 2.4 percent. Share calculations also were prepared based on the nine segments of I-5 between Parker Road and SR-14 that comprise the I-5 Improvement Project. (See *Landmark Village Traffic Impact Analysis - Supplemental Freeway Fair-Share Calculation Analysis*, Austin-Foust Associates, Revised Final EIR **Appendix F4.7**.)

¹⁹ I-5 PA & ED HOV & Truck Lanes - SR-14 to Parker Road Traffic Study, Austin Foust Associates, Inc., October 2007. (A copy of the study is included in Recirculated EIR **Appendix 4.7**.)

²⁰ Ibid. - I-5 HOV/Truck Lanes Project SR-14 to Parker Road, Final Environmental Impact Report/Environmental Assessment with Finding of No Significant Impact (September 2009). Excerpts of the Final EIR/EA are included in Revised Final EIR **Appendix F4.7**.

**Table 4.7-34
Landmark Village I-5 Share Summary**

Location	Project Trips	Other Future Trips	Existing Trips	Total Future Trips
406. I-5 s/o Rye Canyon Road to Magic Mtn. Pky. PM Peak Hour Trips Share	311 3.1%	9,591 96.9%	8,258	18,160
407. I-5 s/o Magic Mountain Pky. to Valencia Blvd. PM Peak Hour Trips Share	219 2.5%	8,494 97.5%	9,987	18,700
408. I-5 s/o Valencia Blvd. to McBean Pky. PM Peak Hour Trips Share	202 2.1%	9,511 97.9%	10,657	20,370
410. I-5 s/o Pico/Lyons to Calgrove Avenue PM Peak Hour Trips Share	126 1.7%	7,387 98.3%	11,347	18,860
Total PM Peak Hour Trips Average Share	858 2.4%	34,983 97.6%	40,249	76,090

Source: SCVCTM 4.1.a Long-Range Cumulative Constrained Flow Model (Cumulative Development Nexus Share Summary). See Recirculated Draft EIR **Appendix 4.7** for share calculations for all I-5 improvement project segments.

Table 4.7-35, Year 2030 Long-Range Cumulative Freeway Conditions With Landmark Village (I-5 Improvement Project Lanes), summarizes the freeway volume-density and LOS calculations for the long-range cumulative setting with the planned I-5 freeway improvements in place. With the improvements in place, no freeway segment is forecast to exceed LOS E and, therefore, the significant long-range cumulative impacts to the I-5 freeway would be mitigated to levels below significant. Additional analyses of the project's freeway impacts using revised freeway lane capacities and updated forecasts of long-range cumulative conditions further evidence that the project's impacts would be less than significant with implementation of the I-5 Improvement Project. (See Revised Final EIR, **Appendix F4.7, AFA Memorandum, Landmark Village Traffic Impact Analysis - Supplemental Freeway Analysis (June 9, 2011).**)

(5) Cumulative Impacts - No Potrero Canyon Road Bridge Scenario

The long-term (2030) cumulative impacts analysis presented in this section assumes the Potrero Canyon Road Bridge would be constructed and in place by 2030, consistent with the County's long-term plans as contained in the Los Angeles County Highway Plan. Of note, however, the U.S. Army Corps of Engineers (Corps) and California Department of Fish and Game (CDFG) recently approved a Newhall Ranch development scenario under which the Potrero Canyon Road Bridge would not be constructed. As part of its consideration of the Newhall Ranch Resource Management and Development Plan/Spineflower Conservation Plan (RMDP/SCP), the Corps and CDFG considered an alternative referred to as the Least Environmentally Damaging Practicable Alternative (LEDPA), which subsequently was approved. Under this alternative, in an effort to reduce impacts to jurisdictional waters and wetlands in the Santa Clara River and lower Potrero Canyon, construction of the Potrero Canyon Road Bridge would not be covered by the state and federal permits issued in connection with the RMDP/SCP. (Please see **Updated Topical Response 2: Newhall Ranch RMDP/SCP Project and Associated EIS/EIR**, for additional information regarding the LEDPA.) Notwithstanding, as noted above, the Potrero Canyon Road Bridge is included in and is part of the County's Highway Plan and, therefore, the County's present plans include construction of the bridge. However, in the event the County should so decide, the County could take those steps necessary to remove the bridge from the Highway Plan.

In consideration of this potentiality, a supplemental analysis was conducted by Austin-Foust Associates, Inc., to determine what effect, if any, elimination of the Potrero Canyon Road Bridge would have on the results of the traffic impacts analysis presented in this section. A copy of the technical memorandum prepared by Austin-Foust Associates, Inc., is included in **Appendix F4.7**. As explained below, the analysis determined that the Potrero Canyon Road Bridge is not necessary to provide acceptable levels of service to the Landmark Village roadways following project buildout and, therefore, the impacts analysis would be unaffected by elimination of the bridge.

The Newhall Ranch Specific Plan identifies three future bridge crossings of the Santa Clara River within the Specific Plan boundary – Commerce Center Drive Bridge, Long Canyon Road Bridge, and Potrero Canyon Road Bridge, and the Specific Plan EIR addresses a long-range scenario in which all three crossings are envisioned. Subsequent to the Specific Plan EIR, a separate study was prepared to identify a timeframe for construction of the roadways, including these bridges, that would support the increased traffic levels resulting from development of the Specific Plan, Entrada/Legacy Village, and Valencia Commerce Center buildout (i.e., all the projects that will build out in the Westside of the Santa Clarita Valley over the next 25 years). That study, the *Westside Santa Clarita Valley Roadway Phasing Analysis*, November 2006 (Phasing Study), was reviewed and approved by the Los Angeles County Department of Public Works for the purpose of phasing the roadway improvements necessary to support development of these projects. (A copy of the Phasing Study is included in Revised Final EIR **Appendix F4.7**.)

The process utilized to prepare the Phasing Study consisted of first identifying the amount of development anticipated to occur each year as the Westside area first begins to develop, and continuing through the complete buildout of the Westside area. The Newhall Ranch master developer (the proposed Landmark Village project applicant) provided these anticipated absorption amounts along with the specific geographical areas anticipated to be developed each year. Based on the geographical areas being developed, the roadway infrastructure needed to serve those areas was then identified and separated into seven distinct stages. Special versions of the traffic model used by the County of Los Angeles (i.e., the Santa Clarita Valley Consolidated Traffic Model) were then prepared for each of the seven stages.

The Phasing Study included the calculation of levels of service (LOS) for each stage based on the amount of new land development estimated to be in place at the time of road improvement construction. If deficiencies were identified, the road improvements for that stage were then modified such that acceptable LOS (defined as LOS D or better) was obtained. The study ultimately determined that each stage of road improvement construction would accommodate the concurrent level of development with acceptable levels of service.

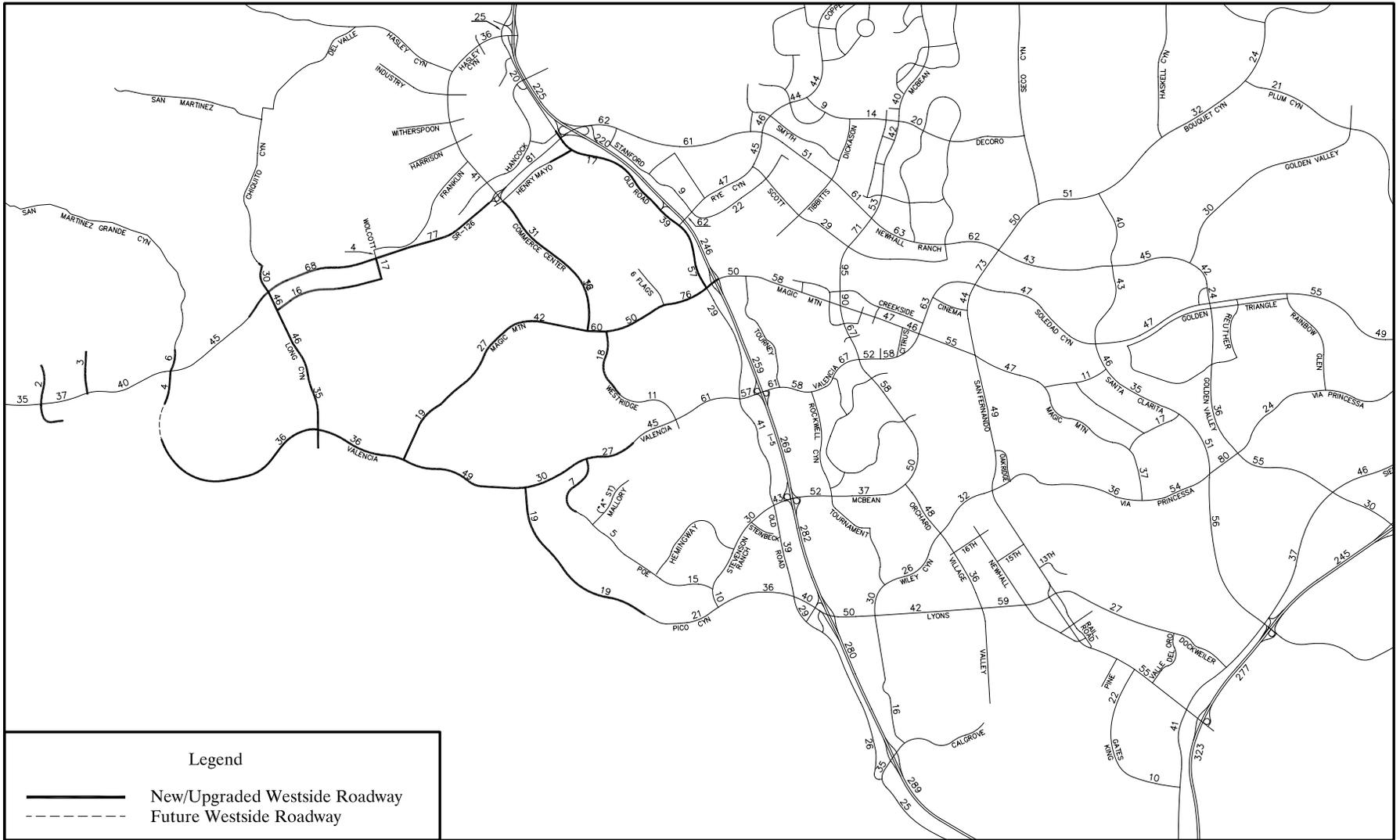
Under the Phasing Study, construction of the primary road improvements, which includes the three bridge crossings, would occur in seven stages concurrent with development of the respective land uses. Specific to the three bridge crossings, the study determined that in order to maintain acceptable levels of service, the Commerce Center Drive Bridge would be included as part of development Stage 2, the Long Canyon Road Bridge would be included as part of Stage 3, and construction of the Potrero Canyon Road Bridge would not occur until the final stage, Stage 7.

Four exhibits from the Phasing Study are included below. Specific to the Potrero Canyon Road Bridge, the first exhibit, **Figure 4.7-26, Phasing Study Figure 23 Average Daily Traffic Volumes (000s) - 2030**, shows the year 2030 average daily traffic (ADT) volumes for the development stage immediately *prior* to construction of the Potrero Canyon Road Bridge (the dashed line at the location of the bridge indicates that the bridge was not included when modeling that stage). The following two exhibits, **Table 4.7-40, Phasing Study Table 6: AM Peak Hour Level of Service Summary** and **Table 4.7-41, Phasing Study Table 7: PM Peak Hour Level of Service Summary**, show that each roadway within the study area would operate at acceptable LOS under this scenario. The fourth exhibit, **Figure 4.7-27, Phasing Study Figure 24 Project Development By Planning Area - 2030**, shows the amount of development that was included within the year 2030 horizon under the development stage immediately prior to construction of the Potrero Canyon Road Bridge. As shown, under this scenario, the Landmark Village development is 100 percent complete by the year 2030, as is the remainder of the Specific Plan area. A fifth exhibit, **Figure 4.7-28, Average Daily Traffic Volumes (000s) - 2030 with Potrero Canyon Road Bridge**, which was prepared for this analysis, shows the ADT volumes under the Stage 7 scenario, which includes the

Table 4.7-40
Phasing Study Table 6
AM Peak Hour Level of Service Summary

<u>Intersection</u>	<u>Exist.</u>	<u>2011</u>	<u>2012</u>	<u>2014</u>	<u>2018</u>	<u>2022</u>	<u>2025</u>	<u>2030</u>
<u>7. I-5 SB Ramps & SR-126</u>	<u>A</u>	<u>C</u>						
<u>8. I-5 NB Ramps & SR-126</u>	<u>A</u>	<u>B</u>	<u>B</u>	<u>B</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>B</u>
<u>9. Old Road & I-5 SB Ramps (at Rye Canyon)</u>	<u>C</u>	<u>A</u>						
<u>10. I-5 SB Ramps & Magic Mountain</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>B</u>	<u>B</u>
<u>11. I-5 NB Ramps & Magic Mountain</u>	<u>B</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>B</u>	<u>C</u>	<u>C</u>
<u>12. I-5 SB Ramps & Valencia</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>A</u>	<u>A</u>	<u>A</u>
<u>13. I-5 NB Ramps & Valencia</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>B</u>	<u>B</u>	<u>C</u>
<u>14. I-5 SB Ramps & McBean</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>
<u>15. I-5 NB Ramps & McBean</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>B</u>
<u>16. I-5 SB On-Loop & Lyons</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>
<u>17. I-5 NB Ramps & Lyons</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>
<u>18. I-5 SB Ramps & Calgrove</u>	<u>A</u>	<u>B</u>	<u>B</u>	<u>B</u>	<u>B</u>	<u>C</u>	<u>C</u>	<u>A</u>
<u>19. I-5 NB Ramps & Calgrove</u>	<u>B</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>D</u>	<u>D</u>	<u>D</u>	<u>B</u>
<u>20. I-5 SB Ramp & Lyons</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>
<u>25. Old Road & Rye Canyon</u>	<u>D</u>	<u>B</u>	<u>C</u>	<u>C</u>	<u>D</u>	<u>D</u>	<u>D</u>	<u>D</u>
<u>26. Old Road & Magic Mountain</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>C</u>	<u>D</u>
<u>27. Old Road & Valencia</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>C</u>	<u>C</u>
<u>28. Old Road & McBean</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>
<u>29. Old Road & Pico</u>	<u>A</u>	<u>D</u>	<u>D</u>	<u>D</u>	<u>C</u>	<u>C</u>	<u>D</u>	<u>D</u>
<u>80. Wolcott & SR-126</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>C</u>
<u>81. Commerce Center & Henry Mayo</u>	<u>--</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>C</u>
<u>82. Commerce Center & SR-126 EB Ramps</u>	<u>--</u>	<u>A</u>						
<u>83. Commerce Center & SR-126 WB Ramps</u>	<u>--</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>D</u>	<u>C</u>
<u>96. Martinez/Potrero & SR-126</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>
<u>101. Long Canyon & Valencia</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>
<u>102. Newhall Ranch & Valencia</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>
<u>103. Pico Canyon & Valencia</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>B</u>
<u>104. Poe & Valencia</u>	<u>--</u>	<u>--</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>B</u>
<u>105. Westridge & Valencia</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>
<u>106. Commerce Center & Magic Mountain</u>	<u>--</u>	<u>A</u>	<u>B</u>	<u>D</u>	<u>C</u>	<u>A</u>	<u>B</u>	<u>C</u>
<u>107. Westridge & Magic Mountain</u>	<u>--</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>B</u>	<u>B</u>
<u>110. Chiquito Canyon & SR-126</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>D</u>	<u>D</u>
<u>118. Six Flags Entrance & Magic Mountain</u>	<u>--</u>	<u>A</u>						

See Figure B-1 for intersection locations.




NOT TO SCALE

SOURCE: Austin-Foust Associates, Inc. Memorandum Figure 23 – July 2009

(New) FIGURE 4.7-26

Average Daily Traffic Volumes (000s) - 2030

Table 4.7-41
Phasing Study Table 7
PM Peak Hour Level of Service Summary

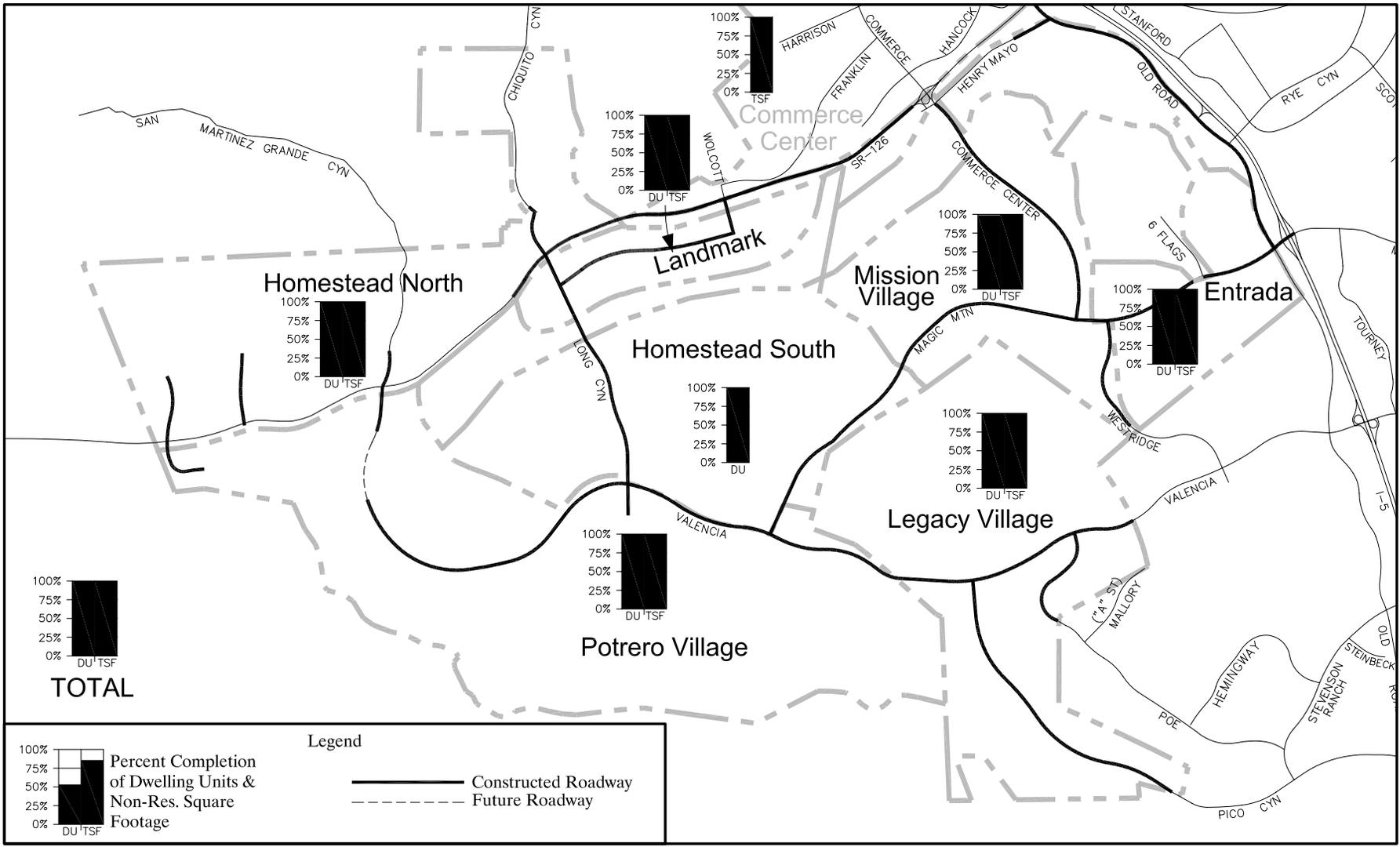
Intersection	Exist.	2011	2012	2014	2018	2022	2025	2030
<u>7. I-5 SB Ramps & SR-126</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>B</u>	<u>B</u>	<u>B</u>	<u>B</u>	<u>C</u>
<u>8. I-5 NB Ramps & SR-126</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>B</u>	<u>B</u>	<u>B</u>	<u>B</u>	<u>C</u>
<u>9. Old Road & I-5 SB Ramps (at Rye Canyon)</u>	<u>E</u>	<u>B</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>B</u>	<u>C</u>	<u>D</u>
<u>10. I-5 SB Ramps & Magic Mountain</u>	<u>A</u>	<u>B</u>	<u>B</u>	<u>B</u>	<u>D</u>	<u>D</u>	<u>D</u>	<u>C</u>
<u>11. I-5 NB Ramps & Magic Mountain</u>	<u>B</u>	<u>B</u>	<u>B</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>D</u>	<u>D</u>
<u>12. I-5 SB Ramps & Valencia</u>	<u>A</u>	<u>B</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>C</u>	<u>D</u>	<u>D</u>
<u>13. I-5 NB Ramps & Valencia</u>	<u>A</u>	<u>B</u>	<u>B</u>	<u>B</u>	<u>B</u>	<u>B</u>	<u>C</u>	<u>C</u>
<u>14. I-5 SB Ramps & McBean</u>	<u>B</u>	<u>C</u>	<u>B</u>	<u>C</u>	<u>C</u>	<u>D</u>	<u>C</u>	<u>D</u>
<u>15. I-5 NB Ramps & McBean</u>	<u>B</u>	<u>C</u>	<u>B</u>	<u>B</u>	<u>C</u>	<u>C</u>	<u>D</u>	<u>D</u>
<u>16. I-5 SB On-Loop & Lyons</u>	<u>A</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>D</u>	<u>D</u>	<u>D</u>
<u>17. I-5 NB Ramps & Lyons</u>	<u>B</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>D</u>	<u>D</u>	<u>D</u>	<u>D</u>
<u>18. I-5 SB Ramps & Calgrove</u>	<u>B</u>	<u>B</u>	<u>B</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>D</u>	<u>B</u>
<u>19. I-5 NB Ramps & Calgrove</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>B</u>
<u>20. I-5 SB Ramp & Lyons</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>B</u>	<u>B</u>
<u>25. Old Road & Rye Canyon</u>	<u>D</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>B</u>	<u>C</u>	<u>C</u>	<u>D</u>
<u>26. Old Road & Magic Mountain</u>	<u>B</u>	<u>B</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>C</u>	<u>D</u>	<u>D</u>
<u>27. Old Road & Valencia</u>	<u>B</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>D</u>	<u>D</u>
<u>28. Old Road & McBean</u>	<u>C</u>	<u>D</u>	<u>D</u>	<u>D</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>D</u>
<u>29. Old Road & Pico</u>	<u>B</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>D</u>	<u>D</u>	<u>D</u>
<u>80. Wolcott & SR-126</u>	<u>A</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>D</u>	<u>C</u>
<u>81. Commerce Center & Henry Mayo</u>	<u>--</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>C</u>
<u>82. Commerce Center & SR-126 EB Ramps</u>	<u>--</u>	<u>A</u>						
<u>83. Commerce Center & SR-126 WB Ramps</u>	<u>--</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>B</u>	<u>C</u>	<u>C</u>	<u>D</u>
<u>96. Martinez/Potrero & SR-126</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>C</u>
<u>101. Long Canyon & Valencia</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>D</u>
<u>102. Newhall Ranch & Valencia</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>C</u>
<u>103. Pico Canyon & Valencia</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>A</u>	<u>A</u>	<u>C</u>	<u>C</u>
<u>104. Poe & Valencia</u>	<u>--</u>	<u>--</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>
<u>105. Westridge & Valencia</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>
<u>106. Commerce Center & Magic Mountain</u>	<u>--</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>C</u>

<u>Intersection</u>	<u>Exist.</u>	<u>2011</u>	<u>2012</u>	<u>2014</u>	<u>2018</u>	<u>2022</u>	<u>2025</u>	<u>2030</u>
<u>107. Westridge & Magic Mountain</u>	<u>--</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>B</u>	<u>B</u>
<u>110. Chiquito Canyon & SR-126</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>D</u>	<u>D</u>
<u>118. Six Flags Entrance & Magic Mountain</u>	<u>--</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>B</u>	<u>C</u>

See Figure B-1 for intersection locations.

Potrero Canyon Road Bridge. As shown on Figure 4.7-28, the primary effect of the addition of the Potrero Canyon Road Bridge would be to reduce traffic volumes on Long Canyon Road and SR-126 as traffic is redistributed to Potrero Canyon Road.

More specific to the internal or on-site roadways, an assessment of the Landmark Village on-site roadways was conducted based on a comparison of 2030 traffic volumes with and without the Potrero Canyon Road Bridge. As shown on Figure 4.7-26 and Figure 4.7-28, with the exception of Long Canyon Road, traffic volumes on the on-site roadways would be unaffected by the removal of a Potrero Canyon Road Bridge. Specific to Long Canyon Road, as illustrated on Figure 4.7-26 and Figure 4.7-28, traffic volumes on Long Canyon Road would increase without the Potrero Canyon Road Bridge from 28,000/37,000 ADT to 35,000/46,000 ADT. However, the planned six-lane roadway would have sufficient capacity to accommodate the increase in traffic volumes as an ADT of 35,000/46,000 on a six-lane roadway is equivalent to acceptable LOS B/D. As to the local street intersection with Long Canyon Road, an evaluation of the Landmark Village local street ("A" Street) intersection with Long Canyon Road was conducted. The evaluation determined that with the planned six-lane Long Canyon Road, the intersection will operate acceptably at LOS C. As shown on Table 4.7-42, Year 2030 Level of Service Summary, under the 2030 scenario without Potrero Canyon Road Bridge, the intersection would operate at LOS C during the AM Peak Hour and LOS B during the PM Peak Hour. (The intersection capacity utilization (ICU) worksheets are included in Appendix F4.7.)

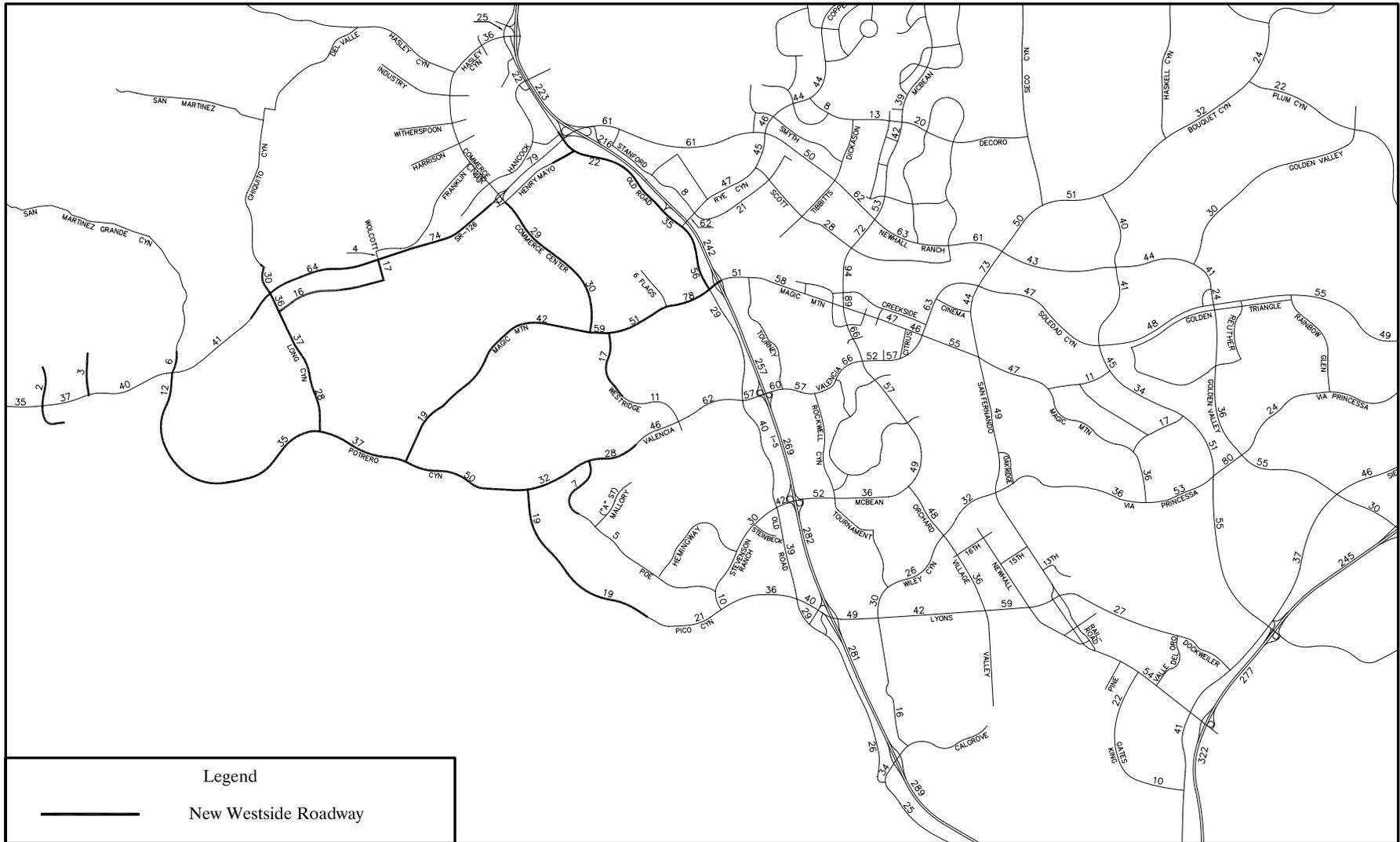


 NOT TO SCALE

SOURCE: Austin-Foust Associates, Inc. Memorandum Figure 24 – July 2009

(New) FIGURE 4.7-27

Project Development By Planning Area - 2030



SOURCE: Austin-Foust Associates, Inc. Memorandum Figure 23b – July 2009

(New) FIGURE 4.7-28

Average Daily Traffic Volumes (000s) - 2030 with Potrero Canyon Road Bridge

Table 4.7-42
Year 2030 Level of Service Summary

<u>Intersection</u>	<u>2030 Without Potrero Bridge</u>				<u>2030 With Potrero Bridge</u>			
	<u>AM Peak Hour</u>		<u>PM Peak Hour</u>		<u>AM Peak Hour</u>		<u>PM Peak Hour</u>	
	<u>ICU</u>	<u>LOS</u>	<u>ICU</u>	<u>LOS</u>	<u>ICU</u>	<u>LOS</u>	<u>ICU</u>	<u>LOS</u>
<u>Long Canyon Road & Landmark Village "A" Street</u>	<u>.75</u>	<u>C</u>	<u>.66</u>	<u>B</u>	<u>.69</u>	<u>B</u>	<u>.67</u>	<u>B</u>
Level of service ranges:	.00 - .60 A		.71 - .80 C		.91 - 1.00 E			
	.61 - .70 B		.81 - .90 D		Above 1.00 F			

Thus, the Phasing Study in combination with the supplemental analysis conducted for the on-site roadways establishes that full buildout of the Specific Plan area, including Landmark Village, can occur without the Potrero Canyon Road Bridge being in place while maintaining acceptable levels of service. This is due primarily to the fact that the Potrero Canyon Road Bridge was included as part of the Specific Plan for purposes other than maintaining acceptable LOS, such as facilitating access to State Route 126, which would still be provided by the Commerce Center Drive Bridge and Long Canyon Road Bridge within the Newhall Ranch Specific Plan. Thus, the Potrero Canyon Road Bridge is not essential to provide acceptable levels of service upon buildout of the Landmark Village project and its absence does not affect the results of the traffic impacts analysis, including the identification of significant impacts, presented in this Section 4.7.

10. CUMULATIVE MITIGATION MEASURES

If all of the related projects were approved, each would be required to construct or finance its fair share of the improvements to the intersections, arterial roadways, or freeway segments significantly impacted by each respective project. Additionally, project-specific environmental analysis conducted for other cumulative projects is to comply with the requirements of the CMP, which provides lead agencies with the opportunity to assess each project's improvement program to ensure that it meets its mitigation goal.

Because the Landmark Village project would result in significant cumulative impacts to the I-5 freeway, the following mitigation is proposed to reduce the traffic-related impacts attributable to the project's share of increased cumulative traffic levels:

- LV-4.7-17** The project applicant shall contribute its fair-share of the costs of adding one high occupancy vehicle (HOV) lane in each direction to the segment of I-5 between Rye Canyon Road and Magic Mountain Parkway consistent with the percentages shown in **Table 4.7-34** of this EIR.
- LV-4.7-18** The project applicant shall contribute its fair-share of the costs of adding one HOV lane in each direction to the segment of I-5 between Magic Mountain Parkway and Valencia Boulevard consistent with the percentages shown in **Table 4.7-34** of this EIR.
- LV-4.7-19** The project applicant shall contribute its fair-share of the costs of adding one HOV lane in each direction to the segment of I-5 between Valencia Boulevard and McBean Parkway consistent with the percentages shown in **Table 4.7-34** of this EIR.
- LV-4.7-20** The project applicant shall contribute its fair-share of the costs of adding one HOV lane in each direction and one truck lane in the southbound direction to the segment of I-5 between Pico Canyon Road/Lyons Avenue and Calgrove Avenue consistent with the percentages shown in **Table 4.7-34** of this EIR.

Subsequent to circulation of the RDEIR, Caltrans and the project applicant worked together to prepare an agreement under which the applicant will pay to Caltrans, at the time of issuance of project building permits, the project's pro-rata share of the I-5 Improvement Project, as determined by an I-5 shares analysis conducted as part of the agreement. Under the agreement, Caltrans acknowledges that the applicant's full payment of its share amount satisfies its mitigation obligations to Caltrans relative to the project. A copy of the agreement, which has been executed by the project applicant, and the corresponding shares analysis are included in the Final EIR. (See Revised Final EIR, **Appendix F4.7, Traffic Mitigation Agreement Fair Share Payment, and Landmark Village (Newhall Ranch) I-5 Share Calculations, AFA.**) Should the County certify this EIR as adequate under CEQA and approve the Landmark Village project, Caltrans, as a responsible agency, would utilize the certified EIR as the basis for executing the mitigation agreement.

The following mitigation measure implements the March 2000 agreement entered into between Newhall and the City of Fillmore relating to transportation improvements in the City, and would reduce the Newhall Ranch Specific Plan's contribution to potentially significant cumulative impacts in the City to a level below significant:

- LV-4.7-21** Concurrent with issuance of the first building permit for Landmark Village, the project applicant shall submit a one-time payment of \$300,000 to the City of Fillmore (City) in Ventura County to fund transportation-related improvements in the City consistent with the March 2000 agreement entered into between The Newhall Land and Farming Company and the City. *(This measure implements in part the provisions of Specific Plan mitigation measure SP 4.8-9.)*

The following mitigation measure is proposed to reduce the Newhall Ranch Specific Plan's contribution to potentially significant cumulative impacts at the intersection of Center Street and Telegraph Road (SR-126) in the Ventura County community of Piru to a level below significant:

- LV 4.7-22** Concurrent with the issuance of each Newhall Ranch Specific Plan building permit, the project applicant shall pay to the County of Ventura that development's pro-rata share of the entire Newhall Ranch Specific Plan's fair-share (nine percent, or 1 percent in the case of Landmark Village [130 ADT of 11,000]) of the costs to implement the following roadway improvements at the intersection of Center Street and Telegraph Road (SR-126) in the Ventura County community of Piru: (1) ~~Re-stripe the Center Street southbound approach lane resulting in separate left and right turn lanes~~ Install channelizers and extension striping to prevent left-turn movements from Center Street to eastbound SR-126; (2) Add a westbound right turn deceleration lane to Telegraph Road; and (3) Install a traffic signal at the intersection when warranted. *(This measure implements in part the provisions of Specific Plan mitigation measure SP 4.8-9.)*

11. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project Impacts

Significant project traffic/access impacts would be reduced to less than significant levels with implementation of the mitigation measures recommended in this EIR section and there would be no significant unavoidable traffic/access impacts.

b. Cumulative Impacts

By implementing the mitigation measures discussed above that are attributable to the proposed project and provided that the County requires fair-share participation of the mitigation measures by other projects, no significant unavoidable project or cumulative traffic/access impacts would occur at any evaluated intersection, arterial, or freeway mainline segment in the project study area.

1. SUMMARY

Development of the Landmark Village site over a 4 to 5 year ~~54-month~~ period would involve clearing and grading of the ground surface, trucks importing approximately 5.8 million cubic yards of fill material, and the building of the proposed improvements. These activities typically involve the temporary use of heavy equipment, smaller equipment, and motor vehicles, which generate both continuous and episodic noise. This noise would primarily affect the occupants of on-site uses constructed in the earlier phases of the development (assuming that the site is occupied in sections as other portions are still under construction) and would be audible to occupants of the off-site Travel Village Recreational Vehicle (RV) Park when construction activities occur.

Grading operations at the site and the off-site borrow sites would occur over a 4 year ~~46-week~~ period. Because the Adobe Canyon borrow site is not in close proximity to existing sensitive receptors, grading operations at this site would not result in a significant noise impact. The construction noise would not be audible within the community of Val Verde due to intervening distances and topography.

On-site occupants who would have an uninterrupted line of sight to the construction noise sources could be exposed to increased noise levels during construction, resulting in potentially significant impacts unless mitigated. Noise impacts from these construction activities would be less than significant at the Travel Village RV Park. However, occupants of the RV Park could be exposed to excessive noise levels for a short period of time during construction of a limited segment of the utility corridor ~~construction~~, resulting in significant impacts as construction activity occurs adjacent to the Park. ~~Although~~ Mitigation is recommended to reduce these impacts, ~~such that~~ the resulting noise levels would not ~~may continue to exceed the applicable thresholds, resulting in a significant and unavoidable impact~~. On-site construction noise would not be audible at the community of Val Verde due to distances between the site and the community of Val Verde, the intervening topography that would attenuate on-site noise, and traffic noise along State Route 126 (SR-126) that would “drown out” on-site construction noise to the south.

In the event construction of the Long Canyon Road Bridge requires pile driving into the bed of the Santa Clara River, the noise levels associated with these activities would be audible to occupants of on-site uses constructed prior to the bridge, and would exceed Los Angeles County (County) noise thresholds within 5,000 feet of the pile-driving activities. Therefore, if it is not feasible to complete the pile driving prior to occupancy of on-site noise sensitive residential uses located within 5,000 feet of the pile-driving activities, mitigation is included that would require the project applicant to use pile drilling techniques or a hydrohammer or an equivalent method, which would result in substantially reduced noise levels, in those circumstances in which sensitive receptors are located within 5,000 feet of pile driving activities. ~~With this mitigation, pile driving related noise impacts would be reduced to less than significant levels. a short-term significant and unavoidable construction noise impact would occur. If pile drilling were utilized instead of pile driving, short term noise impacts would be significant and unavoidable at noise sensitive uses located within 1,600 feet of the pile drilling activities.~~

Sound levels from long-range traffic volumes along SR-126 and on the proposed "A" Street would exceed the thresholds of significance for noise sensitive uses proposed along these roadways within the project boundaries. With implementation of the recommended mitigation measures, noise impacts at these noise sensitive uses would be reduced to levels below significant.

The project would construct a fire station which would result in periodic use of sirens and air horns during emergency responses. However, given that the fire station is located in a commercial land use location (not adjacent to residential uses) and sirens and air horns are intermittent noise sources, no significant noise impacts are expected with the construction and operation of the fire station.

Upon buildout, the project would not result in significant mobile or point-source noise impacts to off-site locations. However, future traffic along SR-126, with and without the project, would cause mobile source noise levels at the Travel Village RV Park to exceed 70.0 decibels on an A-weighted scale (dB(A)) community noise equivalent level (CNEL) by ~~2010~~2013. Pursuant to Mitigation Measure 4.9-14 from the Newhall Ranch Specific Plan Program EIR, once noise levels reach 70 dB(A) CNEL at certain locations on the RV Park site, the project applicant will be required to mitigate highway noise levels at Travel Village to 70 dB(A) or less.

Point sources of noise from the proposed on-site parks would include ball fields used during evening hours by the school and/or intramural events that could last for more than several hours. Noises typical of such uses would be from parking lots, participants and observers, loud speakers, etc. Noise levels from these activities could exceed the County Noise Ordinance at residences within Landmark Village that are proposed in close proximity to the school and the public parks, resulting in a significant impact on the residents unless mitigated.

2. BACKGROUND

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.9 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with noise for the entire Newhall Ranch Specific Plan. The County in findings and in the revised Mitigation Monitoring Plan adopted the Newhall Ranch mitigation program for the Specific Plan. The Newhall Ranch Specific Plan Program EIR concluded that Specific Plan implementation would result in significant impacts, but that the identified mitigation measures would reduce the impacts to below a level of significance. All subsequent project-specific development plans and tentative subdivision maps must be consistent with both the Newhall Ranch Specific Plan, adopted May 2003, and the County of Los Angeles General Plan and Santa Clarita Valley Area Plan.

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. **Section 4.8** discusses the existing noise conditions within the Landmark Village site, the project's potential noise impacts, and the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR, as well as additional mitigation measures recommended by this EIR for the Landmark Village project.

3. SUMMARY OF THE NEWHALL RANCH SPECIFIC PLAN PROGRAM EIR FINDINGS

The Newhall Ranch Specific Plan Program EIR identified certain potentially significant impacts related to noise that would occur with implementation of the Specific Plan. Specifically, the Newhall Ranch Specific Plan Program EIR, and related findings, determined that implementation of the adopted Specific Plan could expose on-site sensitive receptors to roadway and stationary noise levels that exceed County standards.

Development of the proposed Specific Plan would occur on a tract-by-tract basis over an estimated 25-year period and would involve grading of the ground surface, and the building of proposed uses. Noise generated by this construction activity would primarily affect the occupants of on-site uses constructed in the earlier phases of development. Off-site residential uses that would be most sensitive to construction noise are located along the northern border of the Specific Plan site in the southern portion of Val Verde. The Newhall Ranch Specific Plan Program EIR concluded that any residential areas which would have an uninterrupted line-of-sight to the construction activity could be exposed to noise levels which would exceed the County's Noise Ordinance standards for residential land uses during that time. This was considered to be a significant impact if unmitigated.

The Program EIR also concluded that noise impacts would result from ongoing activities including vehicular traffic generated by future uses, as well as the human activity on the site itself. Depending on future tract map design, on-site residences, and schools could be exposed to roadway and stationary noise levels that would exceed County standards, thereby potentially creating significant on-site noise impacts. At off-site locations in the local vicinity, traffic generated by the Specific Plan would cause a significant increase in noise levels at the Travel Village RV Park along SR-126. The analysis concluded that no other significant off-site noise impacts would occur at locations within the City of Santa Clarita or the Counties of Los Angeles or Ventura as a result of traffic volumes generated by the Specific Plan or on-site activities within the Specific Plan site.

On a cumulative basis, the Program EIR determined that increased traffic on local roadways due to the proposed Specific Plan and other developments in the Santa Clarita Valley would cause a cumulatively

When assessing community reaction to noise, there is an obvious need for a scale that averages varying noise exposures over time and that quantifies the result in terms of a single number descriptor. Several scales have been developed that address community noise level. Those that are applicable to this analysis are the Equivalent Noise Level (L_{eq}) and the CNEL.⁷ L_{eq} is the average A-weighted sound level measured over a given time interval. L_{eq} can be measured over any time period, but is typically measured for 1-minute, 15-minute, 1-hour, or 24-hour periods. CNEL is another average A-weighted sound level measured over a 24-hour time period. However, the CNEL noise scale is adjusted to account for some individuals' increased sensitivity to noise levels during the evening and nighttime hours. A CNEL noise measurement is obtained after adding 5.0 decibels to sound levels occurring during the evening from 7:00 PM to 10:00 PM, and 10.0 decibels to sound levels occurring during the nighttime from 10:00 PM to 7:00 AM. The 5.0- and 10.0-decibel penalties are applied to account for most people's increased noise sensitivity during the evening and nighttime hours.⁸

b. Methodology

The primary concern regarding on-site noise is the potential for proposed on-site and existing off-site noise sensitive land uses to be exposed to noise levels that exceed adopted or recommended noise thresholds (discussed later in this EIR section). In essence, the analysis of point and line mobile source noise levels deals with the noise-related compatibility of proposed on-site and existing off-site land uses and activities, ~~with other on-site and nearby off-site land uses and activities.~~

(1) Point Source Noise

Determination of future point source noise levels on the project site and in its vicinity is based on available technical reports and literature that are cited throughout this EIR section. Point source noise associated with the project includes project construction and day-to-day activities at the site once it is built out.

⁷ The Noise Element ~~indicates~~ considers both CNEL and L_{dn} equivalent for purposes of analysis. CNEL, however, is used for the noise impact analysis because it is more conservative than the L_{dn} and portrays a worst-case noise scenario, and it is commonly used throughout the State of California in noise impact analysis prepared for EIRs.

⁸ The logarithmic effect of adding these penalties to the ~~peak-hour L_{eq}~~ hourly sound level measurements results in a CNEL measurement that is within approximately 3 dB(A) (plus or minus) of the hourly sound level ~~peak-hour L_{eq}~~ . California Department of Transportation, *Technical Noise Supplement; A Technical Supplement to the Traffic Noise Analysis Protocol*, (Sacramento, California: October 1998), pp. N51-N54.

(2) Mobile Source Noise

(a) On-Site Mobile Source Noise

Future on-site ~~mobile~~line-source noise levels were calculated using the Federal Highway Administration (FHWA) Traffic Noise Model (TNM) Version 2.5. TNM is based on a three-dimensional grid created for the modeled area (in this case, the modeled area includes the Landmark Village site (A Street) and SR-126). In general, model inputs include future peak-hour speeds, volumes, and traffic mix on SR-126 along and through the site; elevations and geometrics of roadways; distances of proposed on-site sensitive uses from roadway centerlines and their estimated elevations; “hard” or “soft” site conditions that would affect noise drop off rates; any existing natural or proposed man-made barriers and terrain lines between the roadways and proposed sensitive uses that may attenuate noise; and roadway grade corrections, if necessary.⁹ On-site highway traffic noise impacts were calculated for future traffic volumes on SR-126 at Santa Clarita Valley buildout in order to represent and mitigate for a worst-case scenario.

All existing and future roadways, barriers, and sensitive noise receptors for Landmark Village were defined in x, y, and z coordinates using a topographic map with a scale of 1 inch = 100 feet. Future roadway traffic volume data was obtained from the Landmark Village traffic report prepared by Austin-Foust Associates, Inc. (see Recirculated Draft EIR **Appendix 4.7**). The project traffic engineer provided peak-hour volumes on all roadways at project and Santa Clarita Valley buildout. Peak-hour speeds based on level of service (LOS) C for all roadways, factoring in roadway geometrics, were also provided by the project traffic engineer. More realistic peak-hour speeds would not necessarily be at LOS C and would be slower than under free-flowing conditions. The slower the traffic, the lower the noise volumes; therefore, this noise impact analysis conservatively assumes worst-case conditions by assuming peak-hour traffic volumes traveling under free-flow conditions. Peak-hour vehicle mix in the project study area was derived from the California Department of Transportation’s (Caltrans) data base and is assumed to be 85.7 percent passenger vehicles, 4.0 percent medium trucks, and 10.3 percent heavy trucks.¹⁰ Finally, TNM was calibrated using data obtained from on-site noise measurements.¹¹

⁹ Sound32 does not account for pavement types and conditions; atypical vehicular noise conditions that do not reflect statewide averages per California Vehicle Noise Reference Energy Mean Emission Levels (Calveno); “transparent” shielding such as wood fences and heavy brush or trees; reflections off nearby buildings or structures; and meteorological conditions.

¹⁰ State of California Department of Transportation, 2008-2001 Annual Average Daily Truck Traffic on the California State Highway System, (Sacramento, California: California Department of Transportation, September 2009 ~~December 2002~~), p. 202-195. Heavy trucks are all vehicles with three or more axles designed for the transportation of cargo; generally, the gross weight is greater than 12,000 kilograms (26,500 pounds [lbs.]). Medium trucks are all vehicles with two axles and six wheels designed for transportation of cargo. Generally, the gross vehicle weight is greater than 4,500 kg (10,000 lbs.) and less than 12,000 kg (26,500 lbs.). Finally, passenger vehicles are all vehicles with two axles and four wheels designed primarily for transportation of nine or fewer passengers (automobiles). Lightweight trucks with a gross vehicular weight of less than 4,500 kg (10,000 lbs.) also fall into this passenger vehicle category.

¹¹ Model calibration was performed algebraically by adding a calibration constant derived from the difference between actual noise measurements taken at the site and noise levels at these locations as calculated by TNM.

(b) Off-Site Mobile Source Noise

Future off-site vehicular noise levels at Travel Village RV Park were calculated using the Caltrans highway noise prediction model, SOUND32, PC Version 1.41. This model was developed using the highway traffic noise prediction method specified in the FHWA *Highway Traffic Noise Prediction Model* (FHWA-RD-77-108). SOUND32 is based on a three-dimensional grid created for the modeled area (in this case, the modeled area includes the Landmark Village site and its immediate environs). In general, model inputs include future peak-hour speeds, volumes, and traffic mix on SR-126 through the modeled area¹²; elevations and geometrics of roadways; distances of proposed on-site noise-sensitive receptors from roadway centerlines and their estimated elevations; “hard” or “soft” site conditions that would affect noise drop off rates; any existing natural or proposed constructed barriers between the roadways and proposed noise-sensitive uses that may attenuate noise; and roadway grade corrections, if necessary.¹³ The average vehicle noise rates (energy rates) utilized in the FHWA model have been modified by Caltrans to reflect average vehicle noise rates identified for California. The Caltrans data show that California automobile noise is 0.8 to 1.0 dB(A) higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dB(A) lower than national levels.¹⁴

5. PLANS AND POLICIES FOR NOISE CONTROL

Plans and policies that pertain to the noise conditions affecting and affected by the proposed project include (1) the County of Los Angeles Noise Ordinance, and (2) the State of California, Department of Health Services, Environmental Health Division *Guidelines for Noise and Land Use Compatibility* (the *Guidelines*).

a. County of Los Angeles Noise Ordinance

The County of Los Angeles Noise Ordinance identifies exterior noise standards for ~~noise point~~point noise sources, specific noise restrictions, exemptions, and variances for exterior point and stationary noise sources. Several of these are applicable to the proposed project and are discussed below.

The County Noise Ordinance states that exterior noise levels caused by ~~noise point~~point noise sources shall not exceed the levels identified in **Table 4.8-2, County of Los Angeles Exterior Noise Standards for**

¹² Future roadway traffic volume data are from the Landmark Village traffic report prepared by Austin-Foust Associates, Inc. (see Recirculated Draft EIR **Appendix 4.7**).

¹³ Sound32 does not account for pavement types and conditions; atypical vehicular noise conditions that do not reflect statewide averages per Calveno; “transparent” shielding such as wood fences and heavy brush or trees; reflections off nearby buildings or structures; and meteorological conditions.

¹⁴ Rudolf W. Hendriks, *California Vehicle Noise Emission Levels*, (Sacramento, California: California Department of Transportation, January 1987), NTIS, FHWA/CA/TL-87/03.

The County Noise Ordinance identifies specific restrictions regarding construction noise. The operation of equipment used in construction, drilling, repair, alteration or demolition work is prohibited between weekday hours of 7:00 PM to 7:00 AM and anytime on Sundays or legal holidays if such noise would create a noise disturbance across a residential or commercial real-property line.¹⁷ The Noise Ordinance further states that the contractor shall conduct construction activities in such a manner that the maximum noise levels at the affected buildings will not exceed those listed in **Table 4.8-3, County of Los Angeles Construction Equipment Noise Restrictions**. All mobile and stationary internal-combustion-powered equipment and machinery is also required to be equipped with suitable exhaust and air-intake silencers in proper working order.

**Table 4.8-3
County of Los Angeles Construction Equipment Noise Restrictions**

Residential Structures			
	Single Family Residential	Multi-Family Residential	Semi-Residential/ Commercial¹
Mobile Equipment: Maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment:			
Daily, except Sundays and legal holidays, 7:00 AM to 8:00 PM	75 dB(A) Leq	80 dB(A) Leq	85 dB(A) Leq
Daily, 8:00 PM to 7:00 AM and all day Sunday and legal holidays	60 dB(A) Leq	64 dB(A) Leq	70 dB(A) Leq
Stationary Equipment: Maximum noise level for repetitively scheduled and relatively long-term operation (periods of 10 days or more) of stationary equipment:			
Daily, except Sundays and legal holidays, 7:00 AM to 8:00 PM	60 dB(A) Leq	65 dB(A) Leq	70 dB(A) Leq
Daily, 8:00 PM to 7:00 AM and all day Sunday and legal holidays	50 dB(A) Leq	55 dB(A) Leq	60 dB(A) Leq
Business Structures			
	All Structures		
Mobile Equipment; Maximum noise levels for nonscheduled, intermittent, short-term operation of mobile equipment:			
Daily, including Sunday and legal holidays, all hours	85 dB(A) Leq		

Source: County of Los Angeles Ordinance No. 11743, Section 12.08.440.

¹ Refers to residential structures within a commercial area. This standard does not apply to commercial structures.

¹⁷ County of Los Angeles Ordinance No. 11743, Section 12.08.440. Noise disturbance is not defined in the ~~noise ordinance~~ **Noise Ordinance**. The County Health Officer has the authority to define and determine the extent of a noise disturbance on a case-by-case basis.

Section 12.08.460 of the County Noise Ordinance prohibits the loading, unloading, opening, closing, or other handling of boxes, crates, containers, building materials, garbage cans or similar objects between the hours of 10:00 PM and 6:00 AM in such a manner as to cause a noise disturbance; however, parking lot and facility cleaning can occur during the late night or early morning hours when parking lots are empty.

Los Angeles County Noise Ordinance No. 11743, Section 12.08.570 exempts warning devices such as police, fire and ambulance sirens, and train horns that are necessary for the protection of public safety from standard noise decibel thresholds.

The County exempts all vehicles of transportation (with a few exemptions) that operate in a legal manner within the public right-of-way, railway, or air space, or on private property, from the standards of the Noise Ordinance. The County has no adopted ordinance regulating individual motor vehicle noise levels. These are regulated by the state.

b. California Department of Health Services

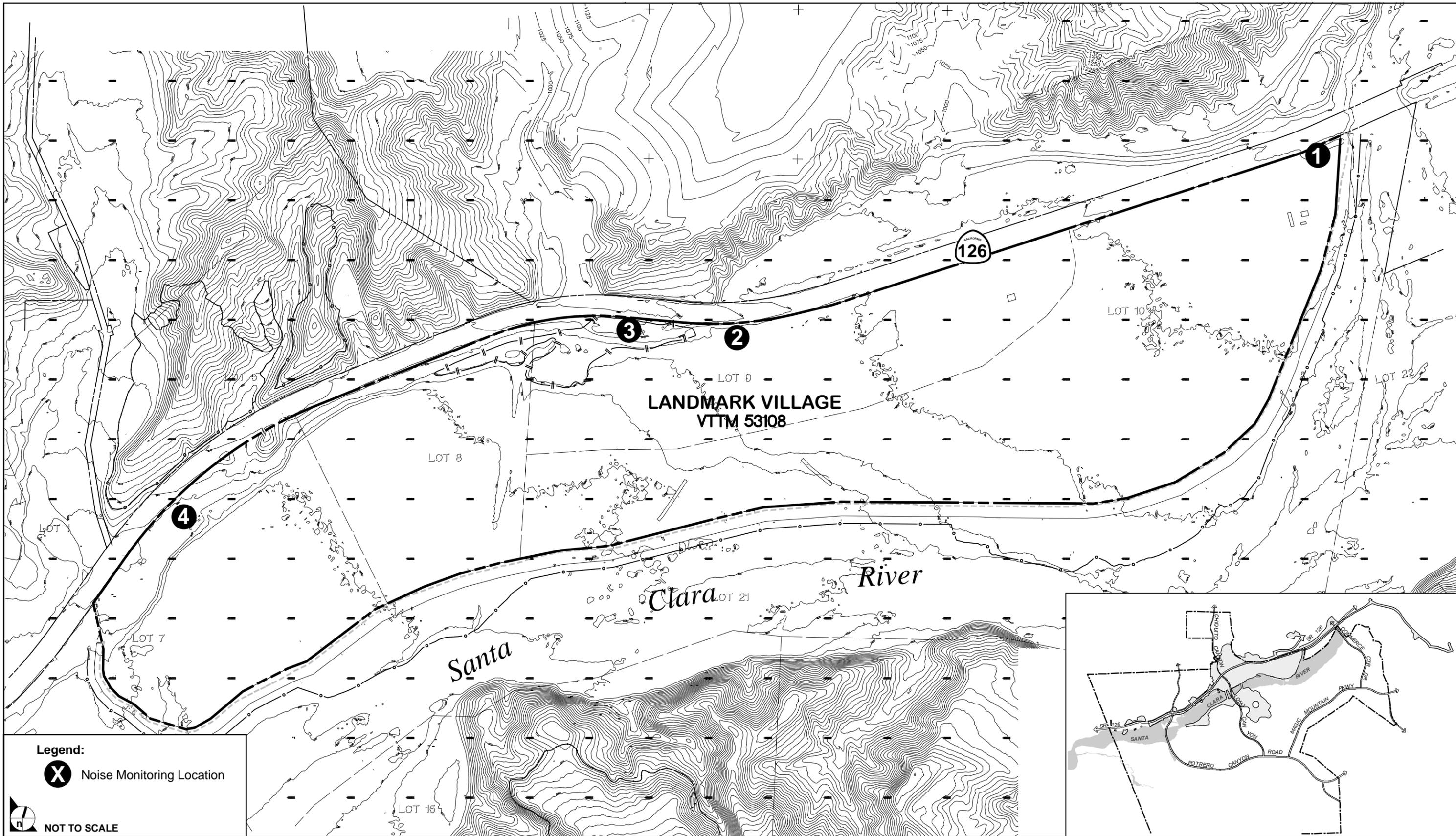
The State of California, Department of Health Services, Environmental Health Division, has published recommended guidelines for noise and land use compatibility, referred to as the *Guidelines*. The *Guidelines*, illustrated in **Figure 4.8-2, Land Use Compatibility Guidelines for Noise**, indicate that residential land uses and other noise sensitive receptors generally should locate in areas where outdoor ambient noise levels do not exceed 65 to 70 dB(A) (CNEL or Day-Night Average Sound Level [L_{dn}]). The Department of Health Services does not mandate application of this compatibility matrix to development projects; however, each jurisdiction is required to consider the *Guidelines* when developing its general plan noise element and when determining acceptable noise levels within its community.¹⁸

According to the *Guidelines*, an exterior noise level of 60 dB(A) CNEL is considered to be a “normally acceptable” noise level for single family, duplex, and mobile homes involving normal, conventional construction, without any special noise insulation requirements. Exterior noise levels up to 65 dB(A) CNEL are typically considered “normally acceptable” for multi-family units and transient lodging without any special noise insulation requirements. Between these values and 70 dB(A) CNEL, exterior noise levels are typically considered “conditionally acceptable,” and residential construction should only occur after a detailed analysis of the noise reduction requirements is made and needed noise attenuation features are included in the project design. Exterior noise attenuation features include, but are not limited to, setbacks to place structures outside the conditionally acceptable noise contour, orienting structures so no windows open to the noise source, and/or installing noise barriers, such as berms and/or solid walls. Within a 65 dB(A) exterior noise environment, interior noise levels will typically be reduced to acceptable levels (to at least 45 dB(A) CNEL) through conventional construction, but with closed

¹⁸ These Guidelines are also published by the Governor’s Office and Planning and Research in the *State of California General Plan Guidelines* (2003).

windows and fresh air supply systems or air conditioning in order to maintain a comfortable living environment.

Under the *Guidelines*, an exterior noise level of 70 dB(A) CNEL is typically the dividing line between an acceptable and unacceptable exterior noise environment for all noise sensitive uses, including schools, libraries, churches, hospitals, day care centers, and nursing homes of conventional construction. Noise levels below 75 dB(A) CNEL are typically acceptable for office and commercial buildings, while levels up to 75 dB(A) CNEL are typically acceptable for industrial uses (for the purposes of this analysis, however, noise impacts will only be evaluated for the noise sensitive uses that are proposed on the site). In



(Revised) FIGURE 4.8-3

On-Site Noise Monitoring Locations

**Table 4.8-4
On-Site Noise Levels**

Monitoring Location	Maximum dB(A) Leq¹	Average dB(A) Leq¹
1	78.0	69.0 8.9
2	71.0	59.0 2
3	68.0	61.0 3
4	70.0	59.0 3

Source: Impact Sciences, Inc. Results of on-site monitoring are provided in Recirculated Draft EIR **Appendix 4.8** (noise calculations).

¹Results of ~~maximum~~ Leq are rounded to the nearest decibel.

These noise levels do not represent peak noise hour conditions. Measurements during peak noise hour conditions would be represented by higher noise values.

(2) Off-Site Roadway Noise Levels

The off-site noise-sensitive uses in the project study area include the Travel Village RV Park, which fronts SR-126 and is located to the east of the Landmark Village site, and the Val Verde community located just north of the Newhall Ranch Specific Plan site along Chiquito Canyon Road. Twenty-four hour noise measurements at Travel Village RV Park demonstrate that the existing noise level at the RV Park is approximately 68.5 dB(A) CNEL (see Recirculated Draft EIR **Appendix 4.8** for noise measurement output data). Locations further from the roadway, such as the residences in the Val Verde community, would have substantially lower noise levels.

b. Point Sources of Noise

(1) On-Site Point Sources of Noise

With the exception of the few agricultural buildings and the agricultural activities on the site, there are no other point sources of noise on the tract map site. Existing agricultural operations generate very little noise. What noise is generated by equipment, when it is operating on the tract map site, is largely masked by highway noise. Equipment that may be operating on the eastern edge of the Landmark Village site may be temporarily audible at Travel Village RV Park.

(2) Off-Site Point Sources of Noise

Due to the dominance of highway noise on the project site, there are no point sources of noise in the vicinity that are audible on the project site. This includes noise generated at the Chiquita Canyon Landfill located north of the proposed project site. Noise levels generated by operations at the Chiquita Canyon Landfill are very low (50 dB(A) or less) at the landfill property boundary and are imperceptible on the Landmark Village site. Most of the noise associated with landfill operations that affect noise levels on the Landmark Village site is generated by truck traffic to and from the landfill. This traffic noise is already included in the measured and calculated on-site traffic noise levels in this impact analysis.

7. PROJECT IMPACTS

a. Significance Threshold Criteria

According to Appendix G of the *California Environmental Quality Act (CEQA) Guidelines*, a project would have a significant noise impact if it would result in:

- a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels; or
- f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.²¹

The following thresholds of significance were developed for this noise impact analysis based on the *State CEQA Guidelines* criteria set forth above, and the plans and policies identified previously in this EIR

²¹ The proposed project site is not located within an airport land use plan or within 2 miles of a public airport, nor is it located within the vicinity of a private airstrip. Therefore, *Guidelines* criteria (e) and (f) are not applicable to this project or this EIR's analysis of noise impacts.

section. These thresholds are consistent with those used in the Newhall Ranch Specific Plan Program EIR, and apply to both project and cumulative project impacts.

(1) Construction Noise Significance Thresholds

If occupants of the proposed project or occupants of off-site uses were subject to project-related construction noise levels in excess of the County's Noise Ordinance standards for construction noise, a significant construction noise impact would occur. For mobile source equipment this threshold is 75 dB(A) L_{eq} for single family residences, 80 dB(A) L_{eq} for multi-family residences and 85 dB(A) L_{eq} for residences in commercial areas every day between 7:00 AM to 8:00 PM, except Sundays and legal holidays. At all other times, the noise thresholds for these uses would be 60, 65, and 70 dB(A) L_{eq} , respectively. For stationary source equipment, the threshold is 60 dB(A) L_{eq} for single-family residences, 65 dB(A) L_{eq} for multi-family residences and 70 dB(A) L_{eq} for residences in commercial areas every day between 7:00 AM to 8:00 PM, except Sundays and legal holidays. At all other times, the noise thresholds for these uses would be 50, 55, and 60 dB(A) L_{eq} , respectively. Because the duration of most construction activities at on- and off-site locations is unknown (e.g., the length of time construction equipment would operate west of Travel Village RV Park is unknown), the noise thresholds are applied to all construction activities assuming long-term duration, whether the activities are considered short or long term under the Noise Ordinance.

With respect to ground borne vibration caused by construction activities, Section 12.08.560 of the County's Noise Ordinance governs vibration:

Operating or permitting the operation of any device that creates vibration which is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property, or at 150 feet (46 meters) from the source if on a public space or public right-of-way is prohibited. The perception threshold shall be a motion velocity of 0.01 inches/second over the range of 1 to 199 Hertz. (Ord. 11778 Section 2 [Art. 5 Section 501 (d)], 1978; Ord 11773 Section 2 [Art. 5 Section 501(s)], 1978.)

Under Section 12.08.560, the project would result in a significant vibration impact if the vibration exceeds a motion velocity of 0.01 inch/second over the range of 1 to 199 Hertz.

(2) Operational Noise Significance Thresholds

(a) On-Site Significance Thresholds

A significant on-site mobile source noise impact would occur if exterior frequent use areas²² for noise-sensitive land uses on the tract map site were exposed to noise levels above the normally acceptable guidelines utilized by the County. These threshold levels are 60 dB(A) CNEL for single family, 65 dB(A) CNEL for multi-family, and 70 dB(A) CNEL for schools and parks uses as identified in **Figure 4.8-2**. Residences located within mixed use/commercial areas would not have an exterior frequent use area (e.g., parks); therefore, the interior standard of 45 dB(A) CNEL would apply as a threshold of significance for those uses. Finally, if occupants of the proposed project were to be subject to point source noise levels originating on or off the site, which are above County Noise Ordinance standards identified in **Tables 4.8-2** and **4.8-3** for the types of uses proposed, a significant on-site noise impact would occur.

(b) Off-Site Significance Thresholds

Off-site noise impacts consider both the ~~guidelines~~Guidelines identified in **Figure 4.8-2**, and community responses to changes in noise levels. Changes in a noise level of less than 3 dB(A) are not typically noticed by the human ear. Changes from 3 to 5 dB(A) may be noticed by some individuals who are extremely sensitive to changes in noise. A 5 dB(A) increase is readily noticeable. Based on this information, a significant off-site noise impact would occur if:

1. An increase of 5 dB(A) or greater in noise level occurs from project-related activities, even if levels remain within the same land use compatibility classification (e.g., noise levels remain within the normally acceptable range); or
2. An increase of 3 dB(A) or greater in noise level occurs from project-related activities which results in a change in land use compatibility classification (e.g., noise levels change from normally acceptable to conditionally acceptable); or
3. Any increase in noise levels occur where existing noise levels are already considered unacceptable under the *Guidelines*.

b. Construction Noise Impacts

Construction activities associated with the proposed project would generate noise from three locational sources —the Landmark Village tract map site, the off-site borrow and grading sites, and the proposed

²² A frequent use area is an exterior location in which people would congregate for recreation or other purposes. Frequent use areas include backyards of single-family residences, recreation areas in condominium and apartment complexes, active or passive recreational areas in parks, play areas at schools, and specified areas of other uses, such as churches.

utility corridor. The noise generated by activities at each source, and the potential impacts to future on-site and existing off-site noise sensitive uses relative to each source, is addressed separately for each below.

(1) Landmark Village Tract Map Site

As discussed below, noise generated in connection with construction on the Landmark Village tract map site would be attributable to either stationary or mobile construction equipment.

(a) Stationary Point Construction Equipment Source Noise

Project development activities would primarily include site preparation (grading and excavation), and construction of internal roadways and other infrastructure, driveways, and structures. Up to 5.8 million cubic yards of earthen material would be excavated from the Adobe Canyon borrow site located within the Specific Plan boundary and hauled by truck to the tract map site where it would be compacted and graded. Additional earthwork is required at the mouth of Chiquito Canyon. These activities typically involve the use of heavy equipment, such as haul trucks, scrapers, tractors, loaders, concrete mixers, cranes, etc. Trucks would also be used to deliver equipment and building materials, and to haul away waste materials. Smaller equipment, such as jackhammers, pneumatic tools, saws, and hammers would also be used throughout the site during the construction phases. In addition, piles may be driven into the Santa Clara riverbed during the construction of the Long Canyon Road Bridge. This equipment would generate both steady state and episodic noise that would be heard both on and off the project site.

The U.S. Environmental Protection Agency (U.S. EPA) has compiled data on the noise-generating characteristics of specific types of construction equipment. These data are presented in **Figure 4.8-4, Noise Levels of Typical Construction Equipment**. As shown, noise levels generated by heavy equipment can range from approximately 68 dB(A) to noise levels in excess of 100 dB(A) when measured at 50 feet. However, as previously noted, these noise levels would diminish rapidly with distance from the construction site at a rate of approximately 6.0 to 7.5 dB(A) per doubling of distance for hard and soft sites, respectively. For example, assuming a “hard” site, a noise level of 68 dB(A) measured at 50 feet from the noise source to the receptor would reduce to 62 dB(A) at 100 feet from the source to the receptor, and further reduce by another 6.0 dB(A) to 56 dB(A) at 200 feet from the source to the receptor.

In general, the first and noisiest stage of construction is site preparation, which usually involves importing soil from off-site locations, earth moving, and compaction of soils. High noise levels created during this phase would be associated with the operation of heavy-duty trucks, scrapers, graders, backhoes, and front-end loaders. When construction equipment is operating, noise levels can range from 73 to 96 dB(A) at a distance of 50 feet from individual pieces of equipment. During the second stage of

construction, foundation forms are constructed and concrete foundations are poured. Primary noise sources include heavy concrete trucks and mixers, cranes, and pneumatic drills. At 50 feet from the source, noise levels in the 70 to 90 dB(A) range are common.

The third and fourth stages of construction consist of interior and exterior building construction, and site cleanup. Primary noise sources associated with the third phase include hammering, diesel generators, compressors, and light truck traffic. During this stage noise levels are typically in the 60 to 80 dB(A) range at a distance of 50 feet. The final stages typically involve the use of trucks, landscape rollers and compactors, with noise levels in the 65 to 75 dB(A) range.

Noise levels generated during the construction stages would primarily affect the occupants of on-site uses constructed in the project's earlier development stages and possibly occupants of Travel Village RV Park. Travel Village is located approximately 925 feet from the nearest proposed graded area on the tract map site (the location of Lot 391). Assuming the operation of a tractor with a decibel level of 95 dB(A) at 50 feet at the eastern boundary of the site (approximate location of Lot 391), the noise level at the westernmost boundary of Travel Village would be approximately 70 dB(A) assuming a drop-off rate of 6.0 decibels per doubling of distance. Occupants of Travel Village, located further away, would

experience less noise due to their greater distance from the construction operations and any intervening structures that may exist between them and the noise source. With regard to other off-site noise sensitive uses located within the project vicinity, at its closest point, the Landmark Village site is over 1 mile from the nearest residence located north of the Specific Plan site along Chiquito Canyon Road in the community of Val Verde. On-site construction noise would not likely be audible at this location because of the distance between the site and this area, traffic noise along SR-126 that would “drown” out construction noise, and intervening topography.

The Noise Ordinance (as presented in **Table 4.8-3**) does not include maximum construction noise levels for transient occupancy (i.e., Travel Village RV Park), but does specify a maximum daily construction noise level for semi-residential/commercial uses (i.e., residential used within a commercial area [see **Table 4.8-3**, above]) of 85 dB(A) for mobile equipment and 70 dB(A) for stationary equipment between the hours of 7:00 AM and 8:00 PM, except on Sundays. Given that the Noise Ordinance maximum noise levels are greater or equal to projected construction noise levels at Travel Village, no significant construction noise impacts to the RV park are anticipated. However, because on-site construction activities could cause the Noise Ordinance standards to be exceeded during short-term construction periods at future on-site residential uses, construction noise impacts are considered potentially significant without mitigation for such on-site areas.

Construction of the proposed Long Canyon Road Bridge may involve pile driving, which is considered a stationary source and subject to stationary source standards of the County Noise Ordinance (i.e., 60 and 65 dB(A) L_{eq} for single and multi-family residences, respectively, and 70 dB(A) for semi-residential, commercial uses, daily from 7:00 AM to 8:00 PM, except Sundays and legal holidays). Pile driving could generate short-term noise levels of approximately 105 dB(A) at 50 feet. If pile driving occurs after occupancy of proposed uses on the western side of the project site, it would cause noise levels to exceed 99.0 dB(A) at the residences closest to the activity (i.e., the apartment complex on Lot 354) for the duration of the pile driving. Residences located further away from the pile driving would experience less noise due to the greater distance from the construction, as well as to the shielding effect of future intervening structures; however, the noise levels could exceed 65 dB(A) and the County's ~~noise ordinance~~ Noise Ordinance for as much as 5,000 feet away from the source assuming no noise attenuation due to intervening terrain or structures. Because the Landmark Village tract map site is expected to develop in a pattern from east to west, with the western portion of the site nearest the pile-driving activity, the pile-driving activity is expected to be completed prior to the occupancy of dwelling units proposed nearest the Long Canyon Road Bridge. Therefore, no dwelling units located within 5,000 feet of the pile-driving site are anticipated to be occupied during the pile-driving activities. Consequently, no significant noise impacts

on future site residents from pile driving are expected. However, if it is not feasible to complete the pile driving prior to occupancy of on-site noise sensitive uses constructed prior to the bridge, a short-term potentially significant impact would occur.

The Recirculated Draft EIR identified pile drilling as an alternate method to pile driving of pile installation to reduce noise levels. Under this method, a hole is drilled into the ground down to the required elevations and concrete is then cast into the hole. Pile drilling generally produces noise levels approximately 10 to 15 decibels lower than pile driving; thus, noise impacts related to pile drilling activities would be less than significant. The Recirculated Draft EIR includes mitigation measure LV-4.8-4, which requires that pile drilling be utilized in lieu of pile driving, though only to the extent feasible; the contingent nature of the mitigation measure resulted in a significant and unavoidable impact determination. Mitigation measure LV-4.8-4 subsequently has been revised to eliminate the feasibility contingency. In addition, hydrohammer pile driving equipment also is available to reduce impacts to less than significant. Hydrohammers utilize an enclosed hydraulically driven hammer with noise reduction. Use of hydrohammer pile driving equipment would reduce noise levels to less than 80 dB(A) at 25 feet, 70 dB(A) at 80 feet, 65 dB(A) at 150 feet, and 60 dB(A) at 250 feet.²³ As shown on **Figure 4.8-4A, Long Canyon Bridge Mitigated Pile Driving Noise Radius of Impact (Hydrohammers) - Residential**, and **Figure 4.8-4B, Long Canyon Bridge Mitigated Pile Driving Noise Radius of Impact (Hydrohammers) - Commercial**, with the use of hydrohammers both residential and commercial uses would be located outside the applicable noise contour threshold. Accordingly, mitigation measure LV-4.8-4 has been revised to require use of cast-in-drilled-hole piles, hydrohammer pile driving, or an alternative method that would achieve equivalent noise level reductions, which would reduce potential impacts to a less than significant level.

Pile driving may also be audible at off-site locations, such as Val Verde and the Travel Village RV Park. However, noise levels would not exceed applicable thresholds at Travel Village or the community of Val Verde. Pile-driving noise impacts, should they occur, would be significant within a 5,000-foot radius for the duration of the pile driving unless mitigated. Both the Travel Village and the Val Verde community are located more than 5,000 feet from the pile-driving site.

Temporarily, vibration from the use of pile drivers could also be noticed by future residents of the Landmark Village project. If Landmark Village homes were to be occupied prior to bridge construction, impacts caused by vibration would be considered less than significant because of the relatively brief time period the pile drivers would be used, and the distance between the bridge site and the proposed homes.

²³ IHC Merwede, *IHC Hydrohammer Pile Driving Equipment*, 2011. Please see Revised Final EIR **Appendix F4.8** for additional information regarding hydrohammers.

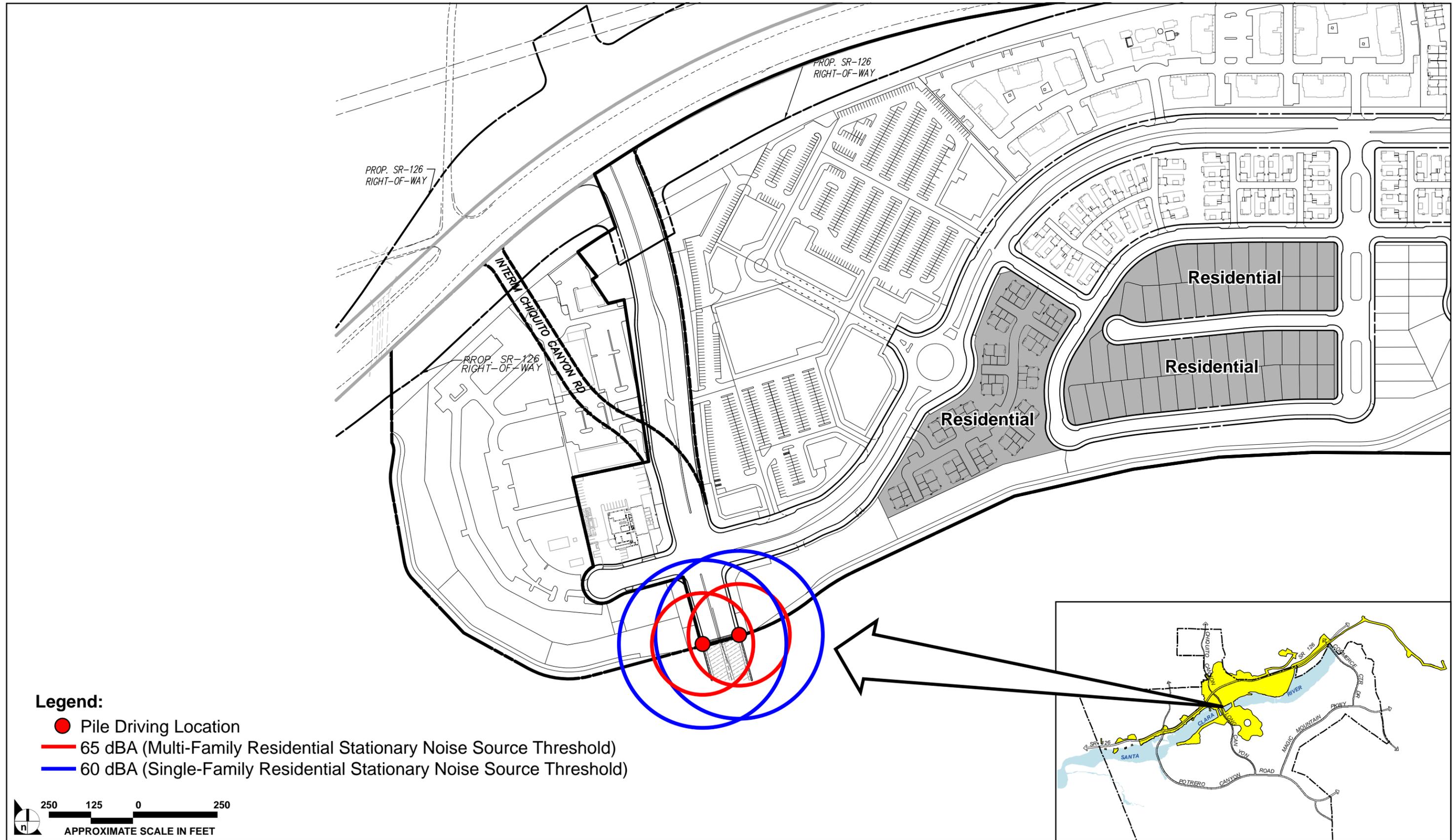


FIGURE 4.8-4A

Long Canyon Bridge Mitigated Pile Driving Noise Radius of Impact (Hydrohammers) – Residential

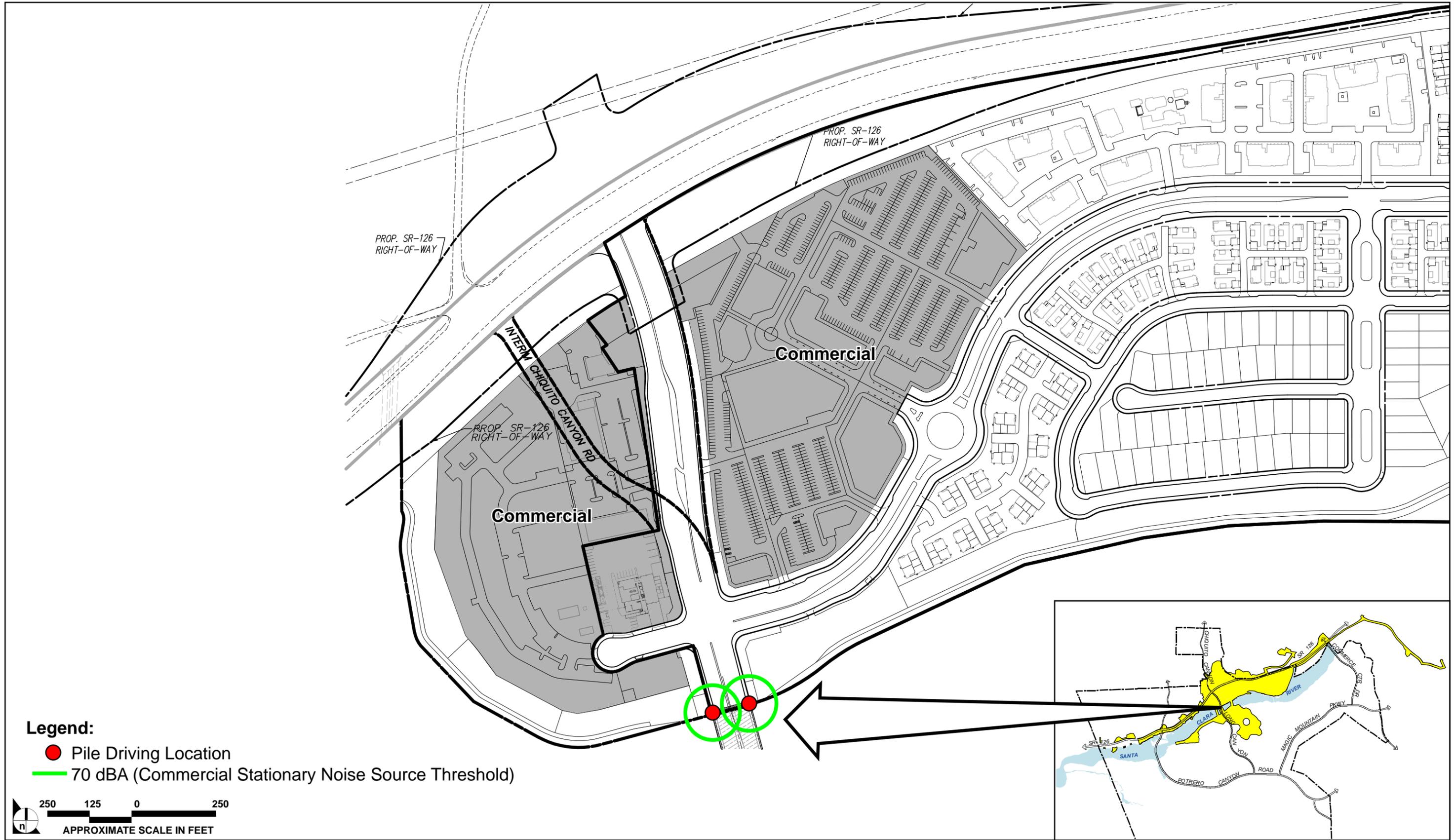


FIGURE 4.8-4B

Long Canyon Bridge Mitigated Pile Driving Noise Radius of Impact (Hydrohammers) – Commercial

However, because the Landmark Village site is expected to develop in a pattern from east to west, with the western portion of the site nearest the pile-driving activity, the pile-driving activity is expected to be completed prior to the occupancy of dwelling units proposed nearest the Long Canyon Bridge. Consequently, no significant vibration impacts on future site residents from pile driving are expected. No other sources of excessive groundborne vibration are expected to occur as a result of the proposed project.

In order to reduce the potential impacts associated with construction activities, the County Department of Public Works, Construction Division typically limits construction activities to between the hours of 6:30 AM and 8:00 PM daily and prohibits work on Sundays and legal holidays. The County Department of Health Services has the authority to further restrict construction activities to between the hours of 7:00 AM and 7:00 PM and any time on Sundays or legal holidays if such noise would create a noise disturbance across a residential or commercial real-property line.²⁴ These restrictions do not, however, necessarily mitigate construction noise that would be in excess of the Noise Ordinance.

(b) Mobile Construction Equipment Source Noise

Heavy-duty trucks that would be used to move construction equipment onto the project site typically have a noise level of approximately 93 dB(A) at 50 feet.²⁵ Off-site sensitive receptors along the truck routes that would have a direct line of sight to the trucks would experience temporary, instantaneous noise levels up to 93 dB(A) at 50 feet from the roadway. Receptors located further away would experience less noise due to their greater distance from the roadway and to any intervening topography and/or structures that may exist between them and the noise source. Because the main pieces of heavy equipment would be moved onto the site just once for each construction phase, this noise impact would be temporary and instantaneous in nature as the trucks pass by these receptors. Furthermore, truck traffic noise experienced at the receptor locations would diminish rapidly as the trucks travel away from them. In short, heavy-duty truck traffic associated with this project would be periodic and restricted to daytime hours, is expected to travel along highways and major arterials where less noise sensitive uses are located, is not expected to traverse through residential areas or past sensitive receptors, and is similar in nature to existing vehicle noise along SR-126. As such, short-term construction truck traffic would not result in a significant noise impact.

²⁴ County of Los Angeles Ordinance No. 11743, Section 12.08.440. Noise disturbance is not defined in the ~~noise ordinance~~ Noise Ordinance. The County Health Officer has the authority to define and determine the extent of a noise disturbance on a case-by-case basis.

²⁵ United States Environmental Protection Agency, *Noise From Construction Equipment and Operations, Building Equipment, and Home Appliances* (NTID 300-1), (Washington, D.C.: United States Environmental Protection Agency), 1971.

Although the daily transportation of construction workers is expected to cause some increases in noise levels along roadways in the project study area, this traffic, which would be largely comprised of passenger vehicles and pick-up trucks, would not represent a substantial percentage of daily volumes in the area and would increase levels less than the 3 dB(A) threshold. Therefore, construction-worker traffic noise would be less than significant.

(2) Borrow Site Grading Activities

Because the Adobe Canyon borrow site is not in close proximity to existing sensitive receptors, grading operations at this site would not result in a significant noise or vibration impacts. As stated above, when heavy construction equipment is operating, noise levels can range from 73 to 96 dB(A) at a distance of 50 feet from individual pieces of equipment. In addition, these same pieces of equipment could result in vibration motion velocities of between 0.01 to 0.07 inches per second at 50 feet.²⁶ A 96 dB(A) noise level (which assumes a backhoe) would attenuate to 72 dB(A) at 800 feet, which would be a less than significant mobile source noise impact under the County's Noise Ordinance. A motion velocity of 0.07 inches per second would attenuate to 0.001 inches per second at 800 feet which would be a less than significant vibration impact under the County's Noise Ordinance. Noise and vibration from grading operations in Chiquito Canyon would likely not be audible at the community of Val Verde except to individuals with the most sensitive hearing. However, given the distance between the grading area and Val Verde, no significant noise or vibration impacts are expected from this source.

Approximately 145,000 heavy-truck trips would be required to haul up to 5.8 million cubic yards of fill material to the project site from Adobe Canyon. The number of truck trips traveling along the haul route will vary daily, depending on the nature of the construction activity. The haul route would traverse Long Canyon and cross the Santa Clara River at an existing agricultural crossing. These trucks would have noise levels up to 93 dB(A) and motion velocity of 0.01 inches/second vibration levels along the route.²⁷ However, no significant impact would occur along this haul route as no sensitive receptors exist in this area.

Approximately 30,000 heavy-truck trips could be required to haul up to 1.2 million cubic yards of fill material to the project site. The number of truck trips traveling along the haul route will vary daily, depending on the nature of the construction activity. The haul route would cross the Santa Clara River at an existing agricultural crossing. These trucks would have noise levels up to 93 dB(A) and motion

²⁶ Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment (FTA-VA-90-1003-06), May 2006.

²⁷ Noise measurements of double capacity haul trucks at intersections are based on in-field measurements by Impact Sciences, Inc. staff at similar project locations.

velocity of 0.01 inches/second vibration levels along the route.²⁸ However, no significant impact would occur along this haul route as no sensitive receptors exist in this area.

(3) Utility Corridor and Water Tank Site

The utility corridor for the proposed project would extend from the existing Water Reclamation Plant on the Old Road located east of the Newhall Ranch Specific Plan to the proposed water reclamation plant, located west of the Landmark Village site within the Specific Plan. The corridor would also extend north of SR-126 up Chiquito Canyon and Wolcott Road to the proposed tank site. Within Landmark Village, the utility corridor would follow the easternmost tract boundary from SR-126 to the location of proposed Lot 323 (open space). From this point, the utility corridor would follow the alignment of proposed "A" Street to Long Canyon Road where it would turn southerly and then follow the southern and western perimeters of proposed Lots 403 (park), 354 (apartment), and 357 (mixed use commercial) to SR-126 where it would extend westerly south of SR-126, and then south to Round Mountain. The utility corridor through Landmark Village would be constructed prior to occupancy of the site, so noise from its construction would not have a noise impact on future uses on the project site. Its on- and off-site construction, however, would be audible at off-site locations.

Construction activity occurring within the utility corridor and water tank site is expected to utilize concrete saws, scrapers, excavators/trenchers, cranes, pavers and other paving equipment, rollers, heavy-duty trucks, water and other heavy-duty trucks, signal boards (possibly diesel-fueled), and other construction equipment. The loudest of this equipment could generate noise levels up to 93 dB(A) at 50 feet.

Occupants of the RV Ppark would be as close as 75 feet from that segment of the utility corridor located south of SR-126 and north of the RV Park, and 2,400 feet from the water tank site located north of SR-126. Guests of this facility could be exposed to noise levels of up to 93 dB(A) for a relatively short period of time (several weeks) during construction of that segment of the utility corridor ~~construction~~, which would be a significant mobile source construction noise impact absent mitigation. This noise level would be clearly audible over the traffic noise generated along SR-126 and would "drown out" the traffic noise during hours of corridor construction at this location.²⁹ However, mitigation is recommended requiring the retention of a qualified acoustic consultant to direct the placement of temporary noise barriers and

²⁸ Ibid.

²⁹ The logarithmic effect of adding "penalties" to the peak-hour Leq measurement results in a CNEL measurement that is within approximately 3 dB(A) (plus or minus) of the peak-hour Leq. The peak-hour Leq for highway traffic noise would be between 65.5 dB(A) and 71.5 dB(A) (68.5 dBA CNEL plus/minus 3 dBA). When added to the projected 65 dB(A) resulting from construction noise, the predicted noise levels would be between 68.2 to 72.4, which is below the County's Noise Ordinance. When two noise sources have a 10 decibel or greater difference in noise levels, the higher noise level drowns out the lower noise level. California Department of Transportation, *Technical Noise Supplement; A Technical Supplement to the Traffic Noise Analysis Protocol*, (Sacramento, California: October 1998), p. N15.

monitor noise levels at the RV Park to ensure noise levels are in compliance with the County's Noise Ordinance. Such temporary noise barriers are regularly used to reduce construction-related noise to acceptable levels. As shown on Figures 4.8-4C through 4.8-4E, Mitigated Construction Noise Levels - Travel Village (Construction Noise Scenario Examples 1-3), construction noise levels generated immediately adjacent to the RV Park that exceed 85 dB(A) would be reduced to acceptable levels on the Travel Village site with the use of temporary sound barriers. Accordingly, any potential impacts associated with temporary construction activities within the utility corridor would be reduced to a level below significant with the recommended mitigation. (See Revised Final EIR Appendix F4.8 for additional information regarding temporary sound barriers.)

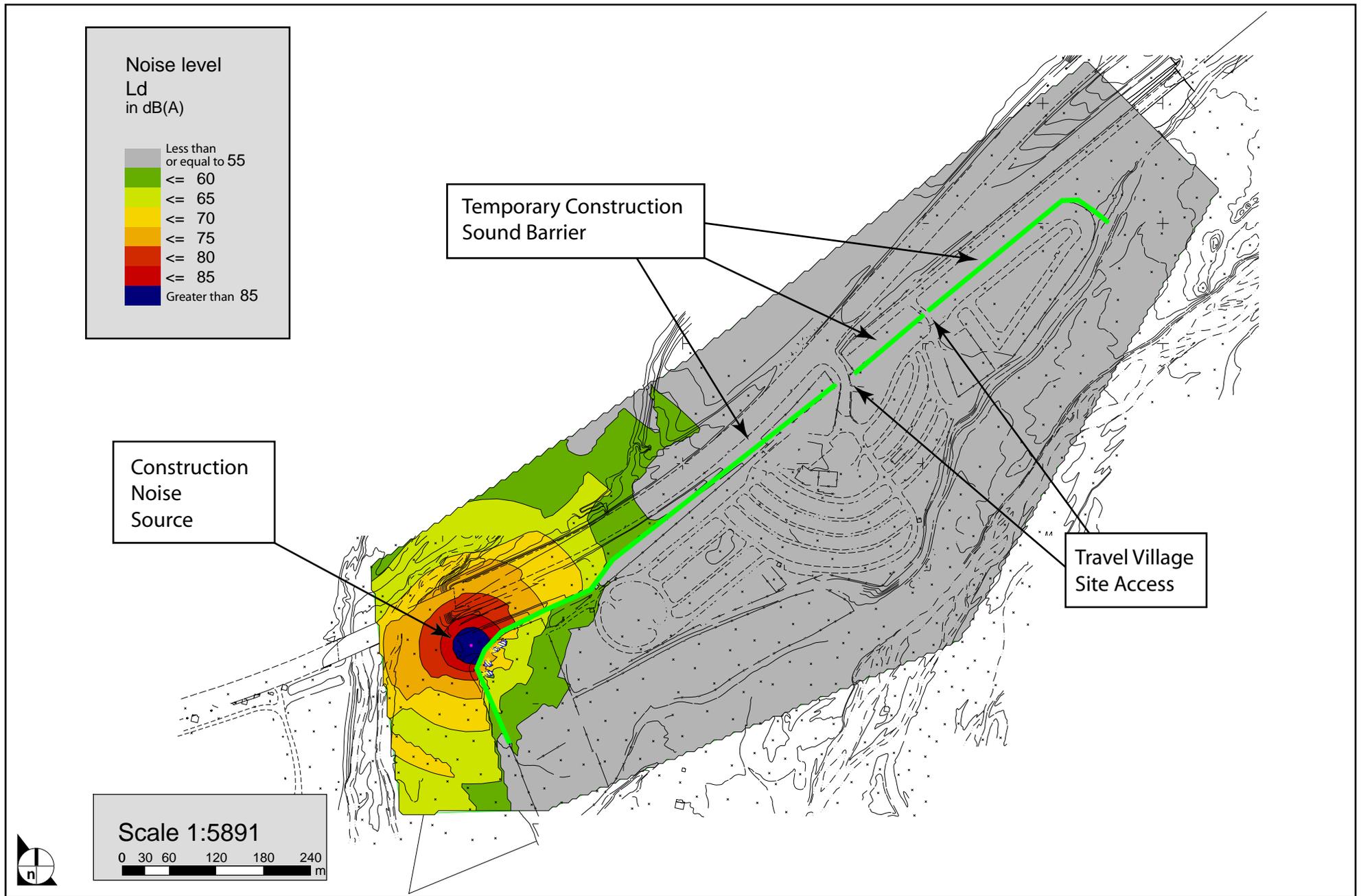
Noise level during water tank construction would be approximately 58 dB(A) and would not be audible due to being "drowned out" by traffic on SR-126. Water tank construction would result in less than significant construction noise impacts.

Within the Landmark Village site to the west of the RV Park, the corridor along the eastern tract boundary would be 950 feet from the closest inhabitable location within the RV Park. At 950 feet, a 93 dB(A) noise level would attenuate to approximately 65 dB(A). This noise level, when combined with the existing highway traffic noise level of 68.5 dB(A) CNEL in the RV Park, could be as high as ~~70.5~~72.4 dB(A) during hours of corridor construction at this location, which would be a less than significant mobile source construction noise impact.³⁰ Given the distance from the utility corridor and water tank site, and the Val Verde community, no significant impacts would occur due to the noise source.

c. Operational Noise Impacts

As the project builds out, on- and off-site noise impacts would result from project-generated traffic, as well as from human activity on the project site itself. This would result in potential impacts to proposed on-site uses from roadway noise, potential impacts to existing off-site uses from roadway noise, and potential impacts to on- and off-site uses from the project's point source noise. Each of these potential noise impacts is discussed separately below.

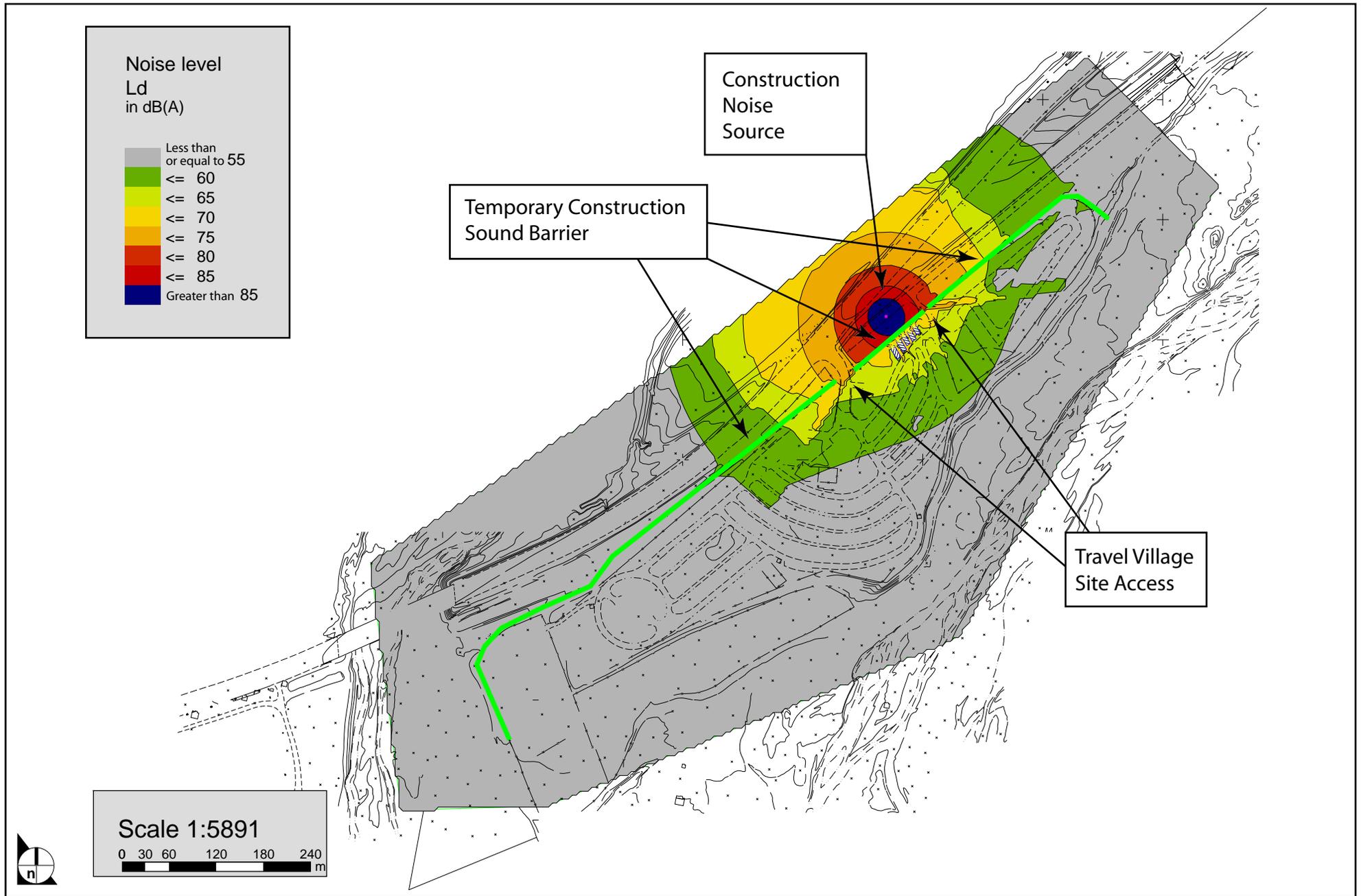
³⁰ When two noise sources have a 2 to 3 decibel difference in noise levels, 2 decibels are added to the higher noise level. California Department of Transportation, *Technical Noise Supplement; A Technical Supplement to the Traffic Noise Analysis Protocol*, (Sacramento, California: October 1998), p. N15.



SOURCE: Impact Sciences, Inc. – July 2011

FIGURE 4.8-4C

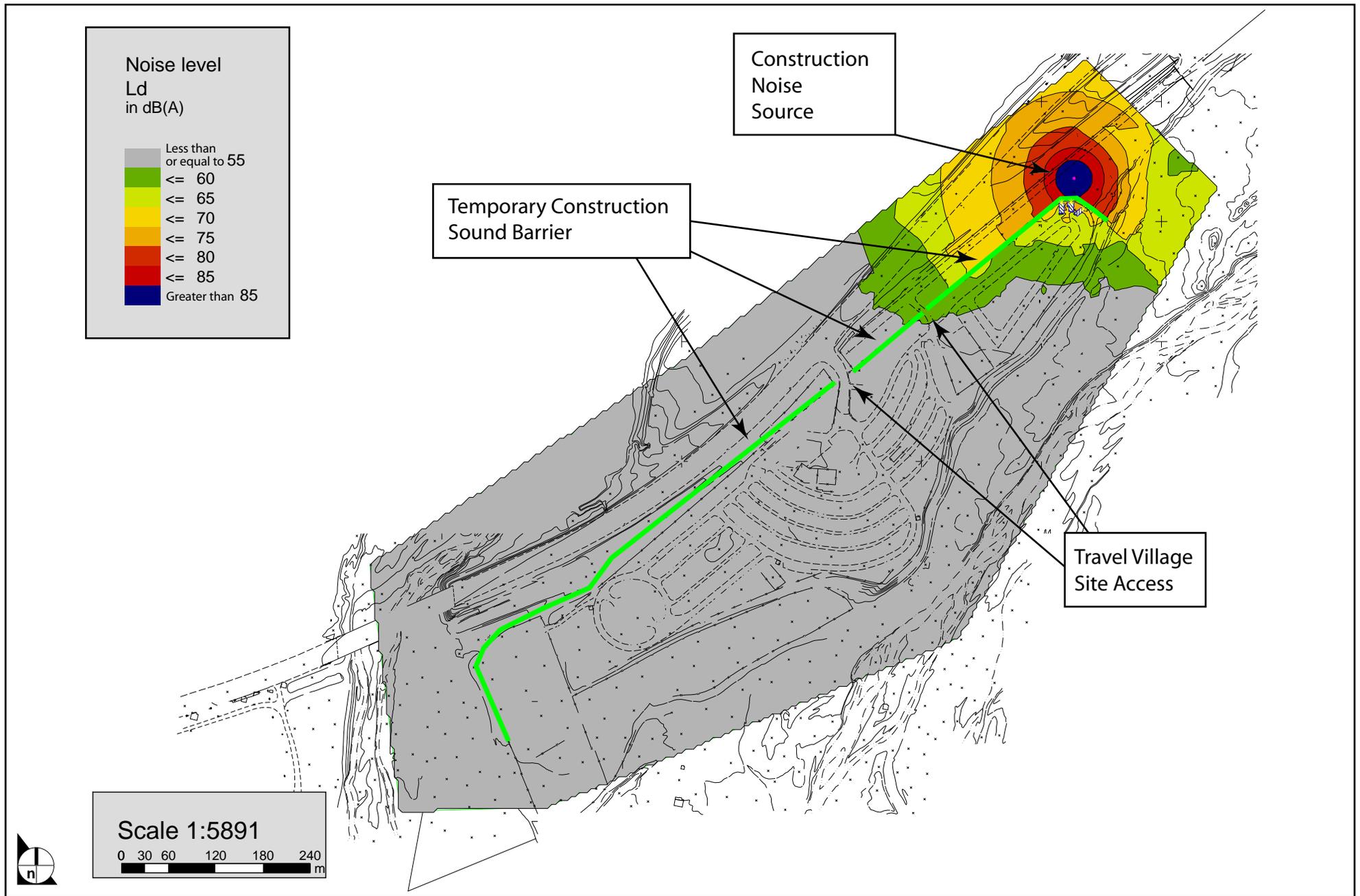
Mitigated Construction Noise Levels - Travel Village (Construction Noise Scenario Example #1)



SOURCE: Impact Sciences, Inc. – July 2011

FIGURE 4.8-4D

Mitigated Construction Noise Levels - Travel Village (Construction Noise Scenario Example #2)



SOURCE: Impact Sciences, Inc. – July 2011

FIGURE 4.8-4E

Mitigated Construction Noise Levels - Travel Village (Construction Noise Scenario Example #3)

(1) **Impacts to On-Site Uses from Roadway Noise**

As stated in **Section 4.75, Traffic/Access**, of this EIR, the proposed project is projected to generate approximately 41,900 average daily trips when completed and fully operational. Post-project on-site traffic noise levels were calculated using TNM Version 2.5, while off-site traffic noise levels for Travel Village were calculated using the FHWA *Highway Traffic Noise Prediction Model*.³¹ Roadway noise impacts on the Landmark Village site were calculated for the worst-case noise conditions. For SR-126 and proposed Wolcott Road, the worst-case noise conditions are represented by Santa Clarita Valley build-out traffic volumes and distribution conditions. For proposed Long Canyon Road and "A" Street, the worst-case conditions are represented by project build-out volumes and distribution conditions in Year ~~2010~~2013 rather than Santa Clarita Valley buildout. As Newhall Ranch builds out, traffic that would normally occur on these roadways would be redistributed on other future Newhall Ranch roadways, thereby reducing traffic volumes on Long Canyon Road and "A" Street.

Findings of the TNM analysis for proposed project conditions are presented in **Table 4.8-5, On-Site Noise Levels Under Proposed Plan at Santa Clarita Valley Buildout**. Multiple noise receptors were plotted on most lots along SR-126 through Landmark Village and along proposed Wolcott Road, Long Canyon Road, and "A" and "C" Streets within Landmark Village. Therefore, the modeling analyzes a range of locations along studied roadways. Wherever multiple sound levels were calculated in one lot,

³¹ As previously discussed, the FHWA *Noise Prediction Model* calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (energy rates) utilized in the FHWA Model have been modified by the California Department of Transportation (Caltrans) to reflect average vehicle noise rates identified for California.

the sound levels were logarithmically averaged. The averaged sound levels are presented in **Table 4.8-5**. All of the calculated sound levels are available for review in Recirculated Draft EIR **Appendix 4.8**.

Findings of the TNM analysis indicate that certain single- and multi-family residential land uses proposed along or in close proximity to SR-126 and along "A" Street³² would be exposed to traffic noise levels in excess of the *Guidelines* (i.e., traffic noise levels would exceed 60 dB(A) CNEL for single family residences and 65 dB(A) for multi-family residences), and, therefore, these uses would be significantly impacted. With respect to the proposed Mixed Use/Commercial lots, as indicated on **Table 4.8-5**, because development of these lots would not include exterior frequent use areas, any residential uses that may be constructed within this designation would be significantly impacted only if interior noise levels exceed 45 dB(A) between 7:00 AM and 10:00 PM.

Table 4.8-5
On-Site Noise Levels Under Proposed Plan
at Santa Clarita Valley Buildout

Lot No.	Proposed Land Use	TOS (CNEL) ¹	Predominant Vehicular Noise Source	CNEL SCV Buildout	Exceeds TOS By (dB) ³
11*	Single Family	60	"A" Street	61	2
22*	Single Family	60	"A" Street	63	3
92	Single Family	60	SR-126	53	-7
98	Single Family	60	SR-126	54	-6
103	Single Family	60	SR-126	56	-4
105	Single Family	60	SR-126	57	-3
107	Single Family	60	SR-126	57	-3
110	Single Family	60	SR-126	58	-2
112	Single Family	60	SR-126	60	0
114	Single Family	60	SR-126	57	-3
115	Single Family	60	"A" Street	60	0
119*	Single Family	60	"A" Street	61	1
122*	Single Family	60	"A" Street	62	2
126*	Single Family	60	"A" Street	62	2
128*	Single Family	60	"A" Street	62	2
146*	Single Family	60	"A" Street	61	1
152*	Single Family	60	"A" Street	62	2

³² As Newhall Ranch Specific Plan builds out, traffic volumes along "A" Street would decrease as traffic becomes redistributed throughout the Specific Plan site; however, the noise impacts on these uses are based on ~~2013~~ 2007 traffic conditions on this roadway.

without the project's traffic volumes to determine if the project would cause a significant noise impact at this location.

The impact of Landmark Village traffic on the existing Travel Village RV Park is represented by the difference between noise generated by the traffic volumes on SR-126 east of proposed Wolcott Road under existing conditions, and noise generated at project buildout in year ~~2010~~2013. Approximately 22,200 project trips³⁴ would pass by the RV Park at project buildout. The addition of the project's 22,200 trips to this roadway segment would increase the existing noise level at the RV Park from 68.5 dB(A) CNEL to 71.8 dB(A) CNEL, which would be a 3.3-decibel increase and is considered to be a significant impact.

Without the proposed project, the Year ~~2010~~2013 noise level at Travel Village would be 71.0 dB(A) CNEL at 100 feet from the highway centerline. Adding the project's 22,200 trips to this segment of SR-126 would increase the noise level at this location to 73.1 dB(A) CNEL, which represents a 2.1-decibel increase. Because noise levels at the RV park would be in excess of normally acceptable noise levels under the *Guidelines* without the project, the 2-decibel project-related noise increase at the RV park would also be considered a significant impact. Because the noise level at the RV park would be greater than 70 dB(A) CNEL by ~~2010~~2013, the project is required to mitigate the noise impact on the RV park under Mitigation Measure 4.9-14 of the Newhall Ranch Specific Plan Program EIR.

Approximately 0.3 percent of Landmark Village traffic (130 average daily trips [ADT]) would travel to and from Ventura County (130 trips at the Los Angeles/Ventura County line/41,900 project ADTs = 0.003) on SR-126 between the County line and the City of Fillmore. West of the City of Fillmore, project traffic would be primarily distributed further along SR-126 and along State Route 23 (SR-23), with less than 10 of the 130 Landmark Village ADT traveling south from Fillmore on SR-23 to the City of Moorpark.³⁵ The Newhall Ranch Specific Plan Program EIR examined two noise sensitive locations within 100 feet of these roadways in Ventura County: the Santa Clara School (the Little Red School House) and single-family homes north of Casey Road in Moorpark. While there are other sensitive locations along these roadways, these are worst-case representations of all noise sensitive receptors located in proximity to these highway segments. The Program EIR indicates that the Specific Plan's 1,038 ADTs along this roadway would increase future noise levels along SR-126 between Newhall Ranch and Fillmore by 0.9 dB(A) CNEL, which is less than the threshold of significance of 3.0 dB(A) and barely perceptible. Given that Landmark Village traffic volumes would represent 12.5 percent (130/1,038 = 0.125) of Newhall Ranch's traffic volumes, the noise impact of Landmark Village traffic along this roadway segment would be

³⁴ This number is derived by multiplying total project trips by 53 percent, which is the percentage of project trips assumed to travel east on SR-126 (41,900 * .53 = 22,207).

³⁵ See, EIR **Section 4.7, Traffic/Access, Table 4.7-27-23, 2010-Ventura County ADT Volumes**. Any project-related contribution of traffic to roadways other than SR-126 and SR-23 in Ventura County would be extremely limited and would not have the potential to result in a significant traffic noise impact.

considerably less and is similarly considered to be less than significant. Nonetheless, Landmark Village is required to mitigate noise impacts on specific sensitive receptors in Ventura County under Mitigation Measures 4.9-15 and 4.9-16 of the Newhall Ranch Specific Plan Program EIR.

In conclusion, if the Landmark Village project were to be constructed and fully occupied today, it would result in a significant noise impact at the RV Park because it would increase noise levels at the RV Park by more than 3 decibels and would result in a change in land use compatibility classification at the RV Park from normally acceptable to conditionally acceptable. Project-related traffic noise would cause a 2-decibel noise increase at the RV Park in year ~~2010~~2013 which would normally be less than significant; however, because noise levels at the RV Park would be greater than 70 dB(A) CNEL and greater than normally acceptable noise levels for transient lodging, project-related noise impacts would be significant. Because year ~~2010~~2013 noise levels at the RV Park would exceed 70 dB(A) CNEL, the project is required to construct a noise abatement barrier to reduce noise levels at the RV Park to 70 dB(A) CNEL or less under Mitigation Measure SP 4.9-14 contained in the Newhall Ranch Specific Plan Program EIR.

The project would cause a less than significant noise impact at residences in Val Verde and in Ventura County under existing and year ~~2010~~2013 conditions. However, under Mitigation Measures SP 4.9-15 and SP 4.9-16 of the Specific Plan Program EIR, the project is required to mitigate its contribution to cumulative noise impacts at specific sensitive receptors in Ventura County.

(3) Point Source Noise Impacts on On-Site and Off-Site Uses

Future residents of Landmark Village would generate and be exposed to point source noise, including people talking, doors slamming, parking lot cleaning, air conditioning units, lawn care equipment, stereos, domestic animals, etc. These noise sources contribute to the ambient noise levels experienced in all similarly-developed areas and typically do not exceed the noise standards for the types of land uses proposed. Furthermore, given their distances from Travel Village, it is unlikely that point source noise at Landmark Village would be audible at that location.

Future residents with direct lines-of-sight to the proposed mixed use/commercial, school, park and other recreational uses would detect short-term and instantaneous noise associated with human activity, such as people talking, children playing, school bells, car doors slamming, auto alarms, tires squealing, etc. These noise levels could be considered an annoyance if they were to occur at odd hours (i.e., between 10:00 PM and 7:00 AM); however, most of these activities are not expected to occur at these hours, and would not typically exceed the County Noise Ordinance standards identified in **Table 4.8-2**. As a result, they are considered less than significant at locations on or off the Landmark Village site.

On-site residents with direct lines-of-sight to the proposed utility corridor and water tank area would detect short-term and instantaneous noise associated with maintenance activities, such as people talking, light weed abatement and maintenance type equipment. These noise levels could be considered an annoyance if they were to occur at odd hours (i.e., between 10:00 PM and 7:00 AM); however, most of these activities are not expected to occur at these hours, and would not typically exceed the County Noise Ordinance standards identified in Table 4.8-2. In addition since the utility corridor and water tank abut

SR-126, it is likely that traffic noise along this roadway would drown out maintenance activities. As a result, these activities would result in less than significant impacts at locations on or off the Landmark Village site.

Other point source noises from the mixed use/commercial uses proposed on the site and the school would be from air conditioning units, delivery trucks, garbage trucks, and employee parking in close proximity to residential uses. Loading dock activities at the mixed use/commercial uses would also occur briefly and intermittently throughout most days, including during early morning hours. In addition, noise would be generated through the use of parking lot vacuums and other facility-cleaning activities. Section 12.08.460 of the County Noise Ordinance prohibits the loading, unloading, opening, closing, or other handling of boxes, crates, containers, building materials, garbage cans or similar objects between the hours of 10:00 PM and 6:00 AM in such a manner as to cause a noise disturbance; however, parking lot and facility cleaning can occur during the late night or early morning hours when parking lots are empty. As a result, cleaning operations are activities that could be heard by nearby residents during nighttime hours and could be considered an annoyance, or even significant impacts if they exceed the County Noise Ordinance standards identified in **Table 4.8-2** and are not mitigated.

Fire trucks and paramedic units leaving the fire station site will use, on occasion, sirens and air horns. Information provided by the Los Angeles County Fire Department indicates that sirens are typically sounded, in emergency situations, when fire apparatus leave the fire stations and continue until they arrive at their destination. Sirens currently utilized by the Fire District are manufactured by Federal Signal, Model Q2B. This siren has been measured to have a noise level of ~~122~~ ~~123~~ dB at 10 feet. ³⁶ Los Angeles County Noise Ordinance No. 11743, Section 12.08.570 exempts warning devices such as police, fire and ambulance sirens, and train horns that are necessary for the protection of public safety from standard noise decibel thresholds. Consequently, there would be no significant impacts from noise sources associated with the fire station and associated vehicles.

Point sources of noise from the parks could be from ball fields used during evening hours by the school and/or intramural events that could last for more than several hours. Noises typical of such uses would be from parking lots, participants and observers, loud speakers, etc. Noise levels from these activities could exceed the County Noise Ordinance at residences within Landmark Village that are proposed in close proximity to the school and the public parks, resulting in a significant impact on the residents unless mitigated.

Specific residential lots that could be adversely affected by commercial and recreational activities on the site are depicted on **Table 4.8-6, On-Site Uses Potentially Impacted By On-Site Commercial and Recreational Activities.**

³⁶ Federal Signal, Technical Specifications and Approvals, accessed June 16, 2010, <http://www.fedsig.com/products/index.php?id=107>

residential uses do not exceed the standards identified in Section 12.08.460 of the Ordinance No. 11743.

- SP 4.9-13 Where residential lots are located with direct lines of sight to the Magic Mountain Theme Park, an acoustic analysis shall be submitted to show that exterior noise on the residential lots generated by activities at the park do not exceed the standards identified in Section 12.08.390 of the Ordinance No. 11743 as identified in Table 4.9-2, County of Los Angeles Exterior Noise Standards for Stationary and Point Noise Sources. *(This mitigation measure is not applicable to the Landmark Village project because the project does not include lots located with direct lines-of-sight to the Magic Mountain Theme Park.)*
- SP 4.9-14 After the time that occupancy of uses on the Newhall Ranch Specific Plan site occurs, AND when noise levels at the Travel Village RV Park reach 70 dB(A) CNEL at locations where recreational vehicles are inhabited, the applicant shall construct a noise abatement barrier to reduce noise levels at the RV Park to 70 dB(A) CNEL or less.
- SP 4.9-15 Despite the absence of a significant impact, applicants for all building permits of Residential, Mixed-Use, Commercial, and Business Park land uses (Project) shall pay to the Santa Clara Elementary School District, prior to issuance of building permits, the project's pro rata share of the cost of a sound wall to be located between SR-126 and the Little Red School House. The project's pro rata share shall be determined by multiplying the estimated cost of the sound wall by the ratio of the project's estimated contribution of ADTs on SR-126 at the Little Red School House (numerator) to the total projected cumulative ADT increase at that location (denominator).³⁷ The total projected cumulative ADT increase shall be determined by subtracting the existing trips on SR-126³⁸ from the projected cumulative trips as shown in Table 1 of Topical Response 5 – Traffic Impacts to State and Local Roads in Ventura County after adding the total Newhall Ranch ADT traveling west of the City of Fillmore. *(Prior to the issuance of building permits for Landmark Village, the project applicant shall calculate and pay to the Santa Clara Elementary School District the pro-rata share of the cost to construct the subject sound wall.) See, EIR Section 4.5, which determined that the Landmark Village project at buildout ~~in~~ ~~2010~~ would generate 105 ADTs on SR-126 at the Little Red School House (EIR Table 4.7-22). Section 4.5 also determined that ~~the buildout~~ ~~2010~~ ADT on SR-126 at the Little Red School House would be 35,000 (EIR Table 4.7-22).*

³⁷ Cost of Sound Wall X (Project ADT on SR-126 @ LRSH*/Total Projected Cumulative ADT Increase on SR-126 @ LRSH*) * LRSH = Little Red School House.

³⁸ 25,165 ADT using linear extrapolation from Table 1 of Topical Response 5 – Traffic Impacts to State and Local Roads in Ventura County.

SP 4.9-16 Despite the absence of a significant impact, the applicant for all building permits of Residential, Mixed-Use, Commercial and Business Park land uses (Project) shall participate on a fair-share basis in noise attenuation programs developed and implemented by the City of Moorpark to attenuate vehicular noise on SR-23 just north of Casey Road for the existing single-family homes which front SR-23. The mitigation criteria shall be to reduce noise levels to satisfy state noise compatibility standards. The project's pro rata share shall be determined by multiplying the estimated cost of attenuation by the ratio of the project's estimated contribution of ADTs on SR-23 north of the intersection of SR-23 and Casey Road (numerator) to the total projected cumulative ADT increase at that location (denominator).³⁹ The total projected cumulative ADT increase shall be determined by subtracting the existing trips on SR-23 north of Casey Road⁴⁰ from the projected cumulative trips as shown in Topical Response 5 – Traffic Impacts of the Program EIR to State and Local Roads in Ventura County after adding the total Newhall Ranch ADT traveling south of the City of Fillmore. (Prior to the issuance of building permits for Landmark Village, the project applicant shall calculate and pay to the City of Moorpark noise attenuation program the project's pro rata share of the estimated cost of attenuation.) See, EIR Section 4.75, which determined that the Landmark Village project at buildout in ~~2010~~2013 would generate 10 ADTs on SR-23 north of Casey Road (EIR Table 4.7-22). Section 4.75 also determined that the ~~2010~~2013 ADT on SR-23 at north of Casey Road would be 8,000 (EIR Table 4.7-22).

SP 4.9-17 Prior to the approval of any subdivision map which permits construction within the Specific Plan area, the applicant for that map shall prepare an acoustical analysis assessing project and cumulative development (including an existing plus project analysis, and an existing plus cumulative development analysis including the project). The acoustical analysis shall be based upon state noise land use compatibility criteria and shall be approved by the Los Angeles County Department of Health Services. (Section 4.8 of this EIR and the accompanying noise calculations (Recirculated Draft EIR Appendix 4.8) provide the acoustical analysis required by this mitigation measure.)

In order to mitigate any future impacts resulting from the project's contribution to significant cumulative noise impacts to development in existence as of the adoption of the Newhall Ranch Specific Plan and caused by vehicular traffic on off-site roadways, the

³⁹ Cost of mitigation x (Project ADT on SR-23 north of Casey Road/Total Projected cumulative ADT Increase on SR-23 north of Casey Road).

⁴⁰ ADT using linear extrapolation from Table 1 of Topical Response 5 – Traffic Impacts to State and Local Roads in Ventura County.

north of the RV Park shall comply with the Los Angeles County Noise Ordinance; stationary construction equipment shall be placed as far away from occupied spaces within the RV Park, and equipment shall not be permitted to idle. A qualified acoustic consultant shall be retained to monitor construction noise once a month at occupied RV spaces to ensure noise levels are in compliance with the County's Noise Ordinance for the duration of the construction.

- LV-4.8-4 ~~To the extent feasible, In lieu of conventional pile driving, the project developer shall utilize cast-in-place drilled-hole piles, or hydrohammer pile driving equipment with noise reduction, or an alternative methodology that would achieve equivalent noise level reductions, in lieu of pile driving if residential units are constructed in those circumstances in which pile-driving activities would occur within 5,000 feet of sensitive receptors. the Long Canyon Bridge prior to any pile-driving activity.~~

Pile drilling is an alternate method of pile installation where a hole is drilled into the ground ~~up~~ to the required ~~depth elevations~~ and concrete is then cast into it. The estimated noise level of pile drilling at 50 feet is 80 to 95 dB(A) L_{eq} compared to 90 to 105 dB(A) L_{eq} ~~for~~ ~~of~~ conventional pile driving.⁴¹ Therefore, pile drilling generally produces noise levels approximately 10 to 15 decibels lower than pile driving.

Hydrohammer pile driving equipment uses an enclosed hydraulically driven hammer with noise reduction. Noise can be reduced to less than 80 dB(A) at 25 feet, 70 dB(A) at 80 feet, 65 dB(A) at 150 feet, and 60 dB(A) at 250 feet.

(2) Operational Mitigation Measures

- LV-4.8-5 To mitigate noise impacts on Lots 8 to 12 and Lots 20 to 24 from traffic along "A" Street, the project applicant or its designee shall, prior to occupancy, construct a minimum 6-foot wall along the northern property lines of these lots.
- LV-4.8-6 To mitigate noise impacts on Lots 115 to 128, 146 to 152, 188, and 313 from traffic along "A" Street, the project applicant or its designee shall, prior to occupancy, construct a minimum 5-foot wall along the northern property lines of these lots. The 5-foot wall shall wrap around the entire length of the eastern boundary of Lot 152.
- LV-4.8-7 To mitigate noise impacts on Lots 325, 326, 349, and 350 (condominiums and apartments east of Wolcott Road) from traffic along SR-126, the project applicant or its designee shall, prior to occupancy, construct a 7-foot berm/solid wall at top of slope along northern edge of Lots 326, 325, 349 and 350, to the northwestern corner of Lot 349. The berm/wall shall be continuous with no breaks or gaps.
- LV-4.8-8 To mitigate noise impacts on Lots 343 and 377 (condominium) and on Lot 376 (apartment east of Long Canyon Road) from SR-126, the project applicant or its designee shall, prior to

⁴¹ U.S. Environmental Protection Agency, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, December 1971.

9. CUMULATIVE IMPACTS

Cumulative noise impacts would primarily occur as a result of increased traffic on SR-126 and on local roadways due to the proposed project and other developments in the Santa Clarita Valley. As previously noted, the only noise sensitive uses in the project study area is the Travel Village RV Park. As discussed above, the noise impact at Travel Village in ~~2010~~2013 without the project would be 71.0 dB(A) CNEL. With buildout of the Landmark Village project, the noise impact would be 73.1 dB(A) CNEL. Because existing noise levels at Travel Village RV Park would already exceed the *Guidelines* for transient lodging (i.e., 70 dB(A)), this impact would be significant and would be mitigated through Mitigation Measure 4.9-14 of the Newhall Ranch Specific Plan Program EIR. Cumulative ~~2010~~2013 traffic noise impacts at the residences northwest of Chiquito Canyon Road/SR-126 would be less than significant.

Although the Landmark Village project would not cause significant cumulative noise impacts in Ventura County, Landmark Village is required to mitigate noise impacts on specific sensitive receptors in Ventura County under Specific Plan Mitigation Measures SP 4.9-15 and SP 4.9-16 through payment of its fair share towards specified noise attenuation measures and program. Assuming that all future development projects that generate traffic along roadways adjacent to these receptors are required by Ventura County to implement similar mitigation measures, cumulative traffic noise impacts at these receptors would be reduced to less than significant.

No Potrero Canyon Road Bridge Scenario

The long-term (2030) cumulative impacts analysis presented in this section assumes the Potrero Canyon Road Bridge would be constructed and in place by 2030, consistent with the County's long-term plans as contained in the Los Angeles County Highway Plan and the approved Specific Plan. Of note, however, the California Department of Fish and Game (CDFG) and the U.S. Army Corps of Engineers (Corps) have approved a Newhall Ranch development scenario under which the Potrero Canyon Road Bridge would not be covered by federal and state permits. Specifically, as part of the Newhall Ranch Resource Management and Development Plan/Spineflower Conservation Plan (RMDP/SCP), CDFG and the Corps approved an alternative referred to as the Draft Least Environmentally Damaging Practicable Alternative (Draft LEDPA). Under this alternative, in an effort to reduce impacts to jurisdictional waters and wetlands in the Santa Clara River and lower Potrero Canyon, construction of the Potrero Canyon Road Bridge would not be covered by the state and federal permits issued in connection with the RMDP/SCP. Notwithstanding, as noted above, the Potrero Canyon Road Bridge is included in and is part of the County's Highway Plan and, therefore, the County's present plans include construction of the bridge.

However, in the event the County should so decide, the County could take those steps necessary to remove the bridge from the Highway Plan.

An analysis was conducted to address the effect, if any, on regional traffic from eliminating the Potrero Canyon Road Bridge. According to a study prepared by Austin-Foust Associates, with the exception of Long Canyon Road, traffic volumes on the on-site roadways would be unaffected by the removal of a Potrero Canyon Road Bridge. The results of this analysis are summarized in revised Recirculated Draft EIR Section 4.7, Traffic/Access, subsection 9.0, Cumulative Impacts. Under the 2030 scenario without the Potrero Canyon Road Bridge, the Long Canyon Road/"A" Street intersection would operate at LOS C during the AM peak hour and LOS B during the PM peak hour; therefore, the intersection will operate at an acceptable level of service. Because the Potrero Canyon Road Bridge is not necessary to provide acceptable levels of service to the Landmark Village roadways following project buildout, no significant traffic impacts would occur with the elimination of the bridge.

A noise impact evaluation of the bridge elimination was conducted in order to determine if significant cumulative noise impacts would occur under this scenario. The results of the analysis are presented in tabular form in Revised Final EIR Appendix F4.8. The cumulative noise impacts would primarily occur as a result of increased traffic on Long Canyon Road. With buildout of the Potrero Canyon Road Bridge, the noise impact 100 feet from the centerline of Long Canyon Road would be up to 65.2 dB(A) CNEL. Without buildout of the Potrero Canyon Road Bridge, the noise impact 100 feet from the centerline of Long Canyon Road would be up to 66.1 dB(A) CNEL. Therefore, the approximate increase of approximately 0.9 dB(A) CNEL would not be a significant impact. As previously discussed, changes in noise of 1 dB(A) are not noticeable and would not result in a significant noise impact.

10. CUMULATIVE MITIGATION MEASURES

Mitigation for cumulative noise impacts on Travel Village is provided for in the Newhall Ranch Specific Plan Program EIR under Mitigation Measure SP 4.9-14. A noise impact analysis for the RV Park was performed using SOUND32/2000 and it was determined that a 5-foot solid wall along the northern property line of the Park would reduce noise impacts from traffic along SR-126 at sensitive receptors in the Park to less than significant at Santa Clarita Valley buildout. No other cumulative mitigation measures are required.

11. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project-Specific Impacts

Mitigation measures recommended to reduce construction-related noise impacts, including impacts associated with pile driving activities, would reduce the ~~magnitude of those identified impacts to a level below significant. ; however, should pile driving be required to construct the Long Canyon Road Bridge instead of pile drilling, and should the project applicant not find it feasible to complete the pile driving prior to occupancy of on site noise sensitive uses within 5,000 feet of the pile driving, a short term significant unavoidable construction noise impact would occur. Noise impacts from the pile driving would be unavoidably significant within 5,000 feet of the pile driving for the duration of the pile driving. Short term noise impacts from pile drilling would also be significant at noise sensitive uses within 1,600 feet of the pile drilling.~~ Furthermore, construction within the utility corridor immediately north of Travel Village RV Park could expose occupants of the RV Park to noise levels up to 93 dB(A) for several weeks during its construction. ~~However, Mitigation is recommended that would~~ mitigation is recommended that would reduce this noise impact to less than significant. With mitigation, no project specific significant unavoidable noise impacts would result; ~~however, even with the mitigation measures in place if individuals are exposed to noise impacts greater than permitted under the County's Noise Ordinance, the project would result in a significant unavoidable temporary noise impact during construction activities in the utility corridor north of Travel Village RV Park.~~

b. Cumulative Impacts

Construction of the recommended 5-foot solid wall to reduce traffic noise levels from SR-126 at the Travel Village RV Park to 70 dB(A) CNEL or less, as required under the Newhall Ranch Specific Plan Program EIR, would mitigate the significant cumulative noise level increase at this location to a level below significant. With its construction, no significant unavoidable noise impacts would result from cumulative development.

4.9 AIR QUALITY

This Section 4.9, Air Quality, has been revised to incorporate updated information and analysis based on the 2007 Air Quality Management Plan and URBEMIS2007 analysis. The updated information does not result in any changes to the significance findings made in the January 2010 RDEIR.

1. SUMMARY

Implementation of the Landmark Village project would generate both construction and operational air pollutant emissions. Construction-related emissions would be generated by on-site stationary sources, on- and off-road heavy-duty construction vehicles, and construction worker vehicles. Operation-related emissions would be generated by on-site and off-site stationary sources and by mobile sources.

During project construction, emissions of carbon monoxide (CO), volatile organic compounds (VOC), ~~and~~ oxides of nitrogen (NO_x), and respirable particulate matter (PM₁₀), including fine particulate matter (PM_{2.5}), would exceed the thresholds of significance recommended by the South Coast Air Quality Management District (SCAQMD) ~~for all but one construction subphase.~~¹ The analysis of local significance threshold (LST) impacts suggests that ~~fine particulate matter (PM₁₀) emissions, including PM_{2.5},~~ could exceed the limitations in SCAQMD Rule 403. While the nitrogen dioxide (NO₂) concentrations exceed the LST thresholds, the California Ambient Air Quality Standards (CAAQS) would be exceeded only if (1) the actual background concentrations were as high as those on which the LSTs are based during the worst-case construction day; (2) the amount of construction activity (e.g., number and types of equipment, hours of operation) assumed in this analysis actually occurred; and (3) the meteorological conditions in the data set used in the dispersion modeling analysis occurred in the vicinity of the project site on the worst-case construction day.

At project buildout, operational emissions of CO, VOC, NO_x, and PM₁₀, including PM_{2.5}, would exceed SCAQMD thresholds, primarily due to mobile source emissions in the summertime and ~~to mobile source and wood burning fireplace emissions in the wintertime.~~ No project land use would be exposed to CO hotspots and the project would not cause a CO hotspot at other locations of sensitive receptors in the project study area. In addition, population growth attributed to the project is consistent with the approved Newhall Ranch Specific Plan and is within growth forecasts contained in the ~~2004~~² Regional Transportation Plan (2004² RTP) prepared by the Southern California Association of Governments (SCAG).² The ~~2004~~ RTP forms the basis for the land use and transportation control portions of the ~~2007~~ Air Quality Management Plan (2007² AQMP). Because the project is within the growth forecasts for the region, it would, consequently, be consistent with the ~~2007~~ AQMP, indicating that it would not

¹ The RDEIR identified PM₁₀ construction emissions as exceeding SCAQMD thresholds. See Table 4.9-17. The omission of PM₁₀ from the listing of emissions in this text was an inadvertent error.

² The 2001 RTP was updated by SCAG in April 2004. The 2004 RTP includes the approved Newhall Ranch Specific Plan within its growth forecasts. Since the 2004 RTP was prepared after the 2003 AQMP was adopted, this EIR section relies on the 2003 AQMP and, therefore, the 2001 RTP.

jeopardize attainment of state and federal ambient air quality standards in the Santa Clarita Valley or throughout the South Coast Air Basin (Basin).

Mitigation measures would be implemented that would reduce construction-related and operational-related emissions to the maximum extent feasible. However, no feasible mitigation exists that would reduce the project's construction-related emissions of CO, VOC, NO_x, or PM₁₀, including PM_{2.5}, to below the SCAQMD's recommended thresholds of significance.³ Additionally, No feasible mitigation exists to reduce the project's operational emissions of CO, VOC, NO_x, or PM₁₀, including PM_{2.5}, to less than significant. Therefore, the project's construction-related and operation-related emissions would be considered significant and unavoidable.

The SCAQMD's criteria of annual emission reductions of one percent for CO, VOC, NO_x, PM₁₀, including PM_{2.5}, and Sulfur Oxide (SO_x), were used to assess cumulative air quality impacts. Through site planning, proposed design features, and with implementation of the mitigation measures recommended in this section, the project would reduce wintertime emissions for CO, VOC, NO_x, and PM₁₀, including PM_{2.5}, by 9.6, 21.2, 14.2, and 9.3~~37.8, 83.1, 14.0, and 45.4~~ percent, respectively. During the summer, these emissions would be reduced by 10.1, 22.4, 13.9, and 9.2~~9.7, 15.5, 12.0, and 9.6~~ percent, respectively. Therefore, cumulative air quality impacts would not be significant given the cumulative project thresholds of significance found in the SCAQMD's California Environmental Quality Act (CEQA) Air Quality Handbook,⁴ and the fact that the project's population forecast is consistent with the SCAQMD's 2007~~3~~ AQMP. However, because the project's operational-related CO, VOC, NO_x, and PM₁₀, including PM_{2.5}, emissions would exceed the SCAQMD's project-specific thresholds of significance, even with all feasible mitigation, project implementation would result in cumulatively significant and unavoidable air quality impacts. This is considered a conservative and "worst-case" approach for estimating the project's cumulative air quality impacts.

All citations to sources and source materials are incorporated by reference. Copies of these documents are available for public inspection and review at the County of Los Angeles (County) Department of Regional Planning, 320 South Temple Street, Los Angeles, California.

2. BACKGROUND

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.10 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with local and regional air quality for the entire Newhall Ranch Specific Plan. The Newhall Ranch Specific Plan mitigation program was adopted by the County in findings and in revised Mitigation Monitoring Plans for both the Specific Plan

³ ~~CO emissions would only exceed SCAQMD's threshold of significance for six weeks during the 54 month construction period, and PM₁₀ emissions would only exceed the thresholds of significance during project on- and off-site grading operations.~~

⁴ The CEQA Air Quality Handbook is in the process of being revised and replaced by an Air Quality Analysis Guidance Handbook (Air Quality Guidance Handbook). As of May 2006, the SCAQMD has revised Chapters 1-9 (www.aqmd.gov/ceqa/hdbk.html), but it is not yet completed.

counties), the Riverside County portions of the Salton Sea Air Basin (SSAB), and Mojave Desert Air Basin (MDAB). The project site is located within the Basin, which is bound by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto mountains to the north and east (see **Figure 4.9-1, South Coast Air Basin**). The project site is not located within either the SSAB or the MDAB.

The Basin consistently generates the highest levels of smog in the United States and is considered to have the worst air quality in the nation. The factors that influence this determination are discussed below.

a. Smog and Its Causes

Smog is a general term based on the words smoke and fog that is used to describe dense, visible air pollution. Although some air pollutants are colorless, smog is commonly used to describe the general concentrations of pollutants in the air. Smog is formed when combustion emissions and gaseous emissions, such as VOC and NO_x, undergo photochemical reactions in sunlight to form ozone (O₃). O₃ is a gas that, in the upper atmosphere, helps to shield the earth from harmful radiation. However, in the lower atmosphere where people live, O₃ poses health risks and damages crops, rubber, and other materials. Particulates, such as soil and dust materials, and vehicle exhaust particulates often mix with O₃, CO, and other compounds and create a brownish haze in the air. “Smog episode” warnings are issued when an occurrence of high concentrations of O₃ is predicted that could endanger or cause harm to the public.⁶

The topography and climate of the Basin combine to make it an area of high smog potential. During the summer months, a warm air mass frequently descends over the lower, cool, moist marine air layer. The warm upper layer forms a cap over the marine layer and inhibits the air pollutants generated near the ground from dispersing upward. Light summer winds and the surrounding mountains further limit the horizontal disbursement of the pollutants. Concentrating volumes of pollutants in this manner allows the summer sunlight to generate high levels of smog. In the winter, cool ground temperatures and very light winds cause extremely low inversions and air stagnation that trap CO and NO_x during the late night and early morning hours. On days when no inversions occur, or when winds average 25 miles per hour or more, there will be no important smog effects. A summary of local climatic conditions is provided later in this section.⁷

⁶ SCAQMD, *CEQA Air Quality Handbook*, (Diamond Bar, California: SCAQMD, April 1993), p. G1s-7.

⁷ ~~SCAQMD, *Air Quality Guidance Handbook*, (Diamond Bar, California: SCAQMD, November 2001), pp. 3-17-3-18.~~
 This document may be reviewed on-line at <http://www.aqmd.gov/ceqa/hdbk.html>.

The air pollutants within the Basin are generated by both stationary and mobile sources. One type of stationary source is known as a “point source,” which has one or more emission sources at a single facility. The other type of stationary source is the “area source,” which is widely distributed and produces many small emissions.

Point sources are usually associated with manufacturing and industrial uses, and include sources that produce electricity or process heat, such as refinery boilers or combustion equipment, but may also include commercial establishments, like gasoline stations, dry cleaners or charbroilers in restaurants. Examples of area sources include residential water heaters, painting operations, lawn mowers, agricultural fields, landfills, and consumer products, such as barbecue lighter fluid or hair spray. “Mobile sources” refer to operational and evaporative emissions from motor vehicles,⁸ and account for nearly 99 percent of the CO emissions, approximately 77 percent of the SO_x emissions, 88 percent of the NO_x emissions, and 65 percent of the VOC found within the Basin.⁹

b. Regulatory Agencies and Responsibilities

Air quality within the Basin is addressed through the efforts of various federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies primarily responsible for improving the air quality within the Basin are discussed below along with their individual responsibilities.

(1) U.S. Environmental Protection Agency (U.S. EPA)

The U.S. EPA is responsible for enforcing the federal Clean Air Act (CAA) and the National Ambient Air Quality Standards (NAAQS). The NAAQS ~~standards~~ identify levels of air quality for seven “criteria” pollutants that are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect the public health and welfare. The seven criteria pollutants include O₃, CO, NO₂ (a form of NO_x), SO₂ (a form of SO_x), PM₁₀, PM_{2.5}, and lead (Pb).¹⁰

In response to its enforcement responsibilities, the U.S. EPA requires each state to prepare and submit a State Implementation Plan (SIP) that describes how the state will achieve the federal standards by specified dates, depending on the severity of the air quality within the state or air basin. The Basin is

⁸ SCAQMD, Air Quality Guidance Handbook, (Diamond Bar, California: SCAQMD, November 2001)*ibid.*, p. 3-2.

⁹ *ibid.*, p. 3-17.

¹⁰ *ibid.*, p. 2-2.

classified by the U.S. EPA as an ~~extreme~~^{severe 17} nonattainment area for the 8-hour O₃ standard,^{11,12} a serious nonattainment area for PM₁₀,¹³ and a nonattainment area for PM_{2.5},¹⁴ ~~and a serious nonattainment area for CO.~~¹⁵

Under the compliance timetables in the 1990 Amendments to the CAA that pertain to O₃, the Basin was originally to achieve attainment status for O₃ within 20 years (i.e., by November 15, 2010). To do so, the Basin was to show a 15 percent reduction from its 1990 Basin-wide emissions inventory within six years from the enactment date of the CAA, and a 3 percent annual reduction thereafter for the remainder of the 20 years. In July 1997, the U.S. EPA announced new health-based standards for O₃. The former 1-hour O₃ standard was revoked on June 15, 2005, and attainment is no longer required. The SCAQMD now has until June 15, 2024~~4~~ at the latest to meet the 8-hour O₃ standard. For the other nonattainment pollutants, the Basin must achieve attainment status by the most expeditious date that can be achieved, but no later than five years from the date the area was designated nonattainment. If the Basin experiences difficulty doing so, the U.S. EPA may extend the period for attainment for an additional 10 years. According to the 2007~~3~~ AQMP, the Basin has met the federal standards for both NO₂ and CO. In May 2007, the U.S. EPA redesignated the Basin as attainment for CO.

In addition, in 1997, the U.S. EPA announced a new standard for particulate matter under the NAAQS: PM_{2.5}. A subset of PM₁₀, PM_{2.5} refers to particulate matter that is 2.5 micrometers or smaller in size, or approximately 1/30 the diameter of a human hair; PM₁₀, in comparison, includes all particulate matter that is 10 micrometers or smaller in size and, as such, includes PM_{2.5}. Sources of PM_{2.5} include fuel combustion from automobiles, power plants, wood burning, industrial processes, and diesel-powered vehicles, such as buses and trucks. These fine particles are also formed in the atmosphere when gases, such as SO₂, NO₂, and VOC (all of which are also products of fuel combustion), are transformed in the air

11 U.S. Environmental Protection Agency. "8-Hour Ozone Areas Listed by Category/Classification as of September 16, 2010~~March 2, 2006~~." [Online] 16 September 2010~~22 May 2006~~. <<http://www.epa.gov/air/oaqps/greenbk/gnc.html>>. ~~On April 30, 2004, the EPA published designations of nonattainment areas with respect to the 8 hour ozone standard. The Basin was designated as "severe 17" nonattainment for the purposes of this standard. Severe 17 nonattainment areas have an attainment date of June 15, 2021 (17 years after the effective date of the designation) to comply with the 8 hour ozone standard. This designation commences a new round of planning to demonstrate compliance with the 8 hour standard.~~

12 U.S. Environmental Protection Agency. "Green Book 8-Hour Ozone Nonattainment Areas." [Online] 16 September 2010~~22 May 2006~~. <<http://www.epa.gov/air/oaqps/greenbk/ca8.html>>.

13 U.S. Environmental Protection Agency. "Particulate Matter Nonattainment Area Map." [Online] 16 September 2010~~22 May 2006~~. <<http://www.epa.gov/air/oaqps/greenbk/mappm10.html>>.

U.S. Environmental Protection Agency. "Particulate Matter Nonattainment Areas as of March 2, 2006." [Online] 16 September 2010~~22 May 2006~~. <http://www.epa.gov/air/oaqps/greenbk/pntc.html>.

14 U.S. Environmental Protection Agency. "Counties Designated Nonattainment for PM-2.5." [Online] 16 September 2010~~August 17, 2007~~. <<http://www.epa.gov/air/oaqps/greenbk/mappm25.html>>.

15 U.S. Environmental Protection Agency. "Carbon Monoxide Nonattainment Area Map." [Online] 22 May 2006. <<http://www.epa.gov/air/oaqps/greenbk/losange.html>>.

by chemical reactions. Fine particles are of concern because they can be deeply inhaled and can put human health at risk, particularly the health of children. The standards that the U.S. EPA set for PM_{2.5} in 1997 include an annual-average standard of 15 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and a 24-hour standard of 65 $\mu\text{g}/\text{m}^3$. The SCAB is currently classified by the U.S. EPA as a nonattainment area with respect to the PM_{2.5} standard.¹⁶ The SCAQMD has until 2015 at the latest to meet the federal PM_{2.5} standard. In September 2006, the U.S. EPA revised the PM_{2.5} standard lowering the 24-hour standard to 35 $\mu\text{g}/\text{m}^3$; however, the 2007 AQMP was not required to address this revised standard.¹⁷

Prior to development of the URBEMIS 2007 model, no model to predict emissions of PM_{2.5} from future development projects had been developed, and the SCAQMD has not established emission based threshold of significance for PM_{2.5} at the time of this writing. Because no model is currently available to assess potential PM_{2.5} impacts from new land development projects, they cannot be assessed separately from the impacts of PM₁₀ emissions as a whole.¹⁸ However, because PM_{2.5} is a subset of PM₁₀, as described above, the project's PM_{2.5} emissions are were inherently calculated along with PM₁₀ emissions by prior models, including the URBEMIS 2002 model. With development of the URBEMIS 2007 model, PM_{2.5} emissions can be assessed separately from the impacts of PM₁₀ emissions as a whole, although the identification of PM₁₀ emission amounts remains inclusive of PM_{2.5} emissions.

(2) California Air Resources Board

The California Air Resources Board (ARB), a department of the California Environmental Protection Agency (CalEPA), oversees air quality planning and control throughout California. It is primarily responsible for ensuring implementation of the 1989 amendments to the California Clean Air Act (CCAA), responding to the federal CAA requirements to establish state ambient air quality standards, and for regulating emissions from motor vehicles and consumer products within the state. The ARB has established emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. It also sets passenger vehicle fuel specifications to further reduce vehicular emissions.¹⁹

¹⁶ U.S. Environmental Protection Agency. "Particulate Matter (PM-2.5) Nonattainment Areas as of March 2, 2006." [Online] 16 September 2010~~22 May 2006~~. <<http://www.epa.gov/air/oaqps/greenbk/qnc.html>>.

¹⁷ SCAQMD, *Final 2007 Air Quality Management Plan*, (Diamond Bar, California: SCAQMD, June 2007), p. ES-4.

¹⁸ ~~Telephone conversation with Patrick Gaffney, Air Pollution Specialist, California Air Resources Board, Planning and Technical Support, Inventory Branch, March 11, 2003.~~

¹⁹ SCAQMD, *Air Quality Guidance Handbook*, (Diamond Bar, California: SCAQMD, November 2001), p. 2-2. This document may be reviewed on-line at <http://www.aqmd.gov/ceqa/hdbk.html>.

The CCAA established a legal mandate to achieve the CAAQS (state standards) by the earliest practicable date. These standards apply to the same seven criteria pollutants as the federal CAA and also include sulfate, visibility, hydrogen sulfide, and vinyl chloride. They are also more stringent than the federal standards and, in the case of PM₁₀ and SO₂, the state standards are far more stringent.

In 1997, after receiving the new U.S. EPA standards, the ARB and Office of Environmental Health Hazard Assessment staff reviewed the scientific literature on the health effects of exposure to particulate matter, and recommended lowering the existing state standard for PM₁₀ and adopting a lower standard for PM_{2.5}.²⁰ Staff specifically recommended that the annual-average standard for PM₁₀ be lowered from 30 µg/m³ to 20 µg/m³ (the 24-hour-average standard of 50 µg/m³ for PM₁₀ would be retained), and that the new annual-average standard for PM_{2.5} in California be established at 12 µg/m³, which is less than the federal standard of 15 µg/m³ (17 Cal.CodeRegs. Section 70200). These standards were adopted by the ARB in June 2002, approved by the Office of Administrative Law (OAL) on June 5, 2003, and became effective on July 5, 2003. The ARB also will consider establishing a 24-hour PM_{2.5} state standard in the future; however, the timing of the adoption of this latter standard is currently unknown.

Health and Safety Code Section 39607(e) requires the ARB to establish and periodically review area designation criteria. These designation criteria provide the basis for the ARB to designate areas of the state as “attainment,” “nonattainment,” or “unclassified” for the state standards. In addition, Health and Safety Code Section 39608 requires the ARB to use the designation criteria to designate areas of California and to annually review those area designations. The ARB makes area designations for 10 criteria pollutants: O₃, CO, NO₂, SO₂, PM_{2.5}, PM₁₀, sulfates, Pb, hydrogen sulfide, and visibility-reducing particles.²¹ Currently, the ARB has not established area designations for vinyl chloride;²² however, the ARB has identified vinyl chloride as a Toxic Air Contaminant (TAC) with an undetermined threshold level of exposure for adverse health effects. Therefore, vinyl chloride is addressed on a project-by-project basis. As discussed below, this project is not expected to emit vinyl chloride or other criteria pollutants, such as sulfates, Pb, hydrogen sulfide, and visibility-reducing particles.

²⁰ California Air Resources Board. “Review of the Ambient Air Quality Standards for Particulate Matter and Sulfates; Standards Review Schedule.” [Online] 16 June 2003. <<http://www.arb.ca.gov/research/aaqs/std-rs/std-rs.htm>>.

²¹ California Air Resources Board. “Area Designations (Activities and Maps).” [Online] 22 December 2003. <<http://www.arb.ca.gov/desig/desig.htm>>. Written communication with Marcy Nystrom, California Air Resources Board, December 24, 2003, stating that state law requires the ARB to make area designations for pollutants with state standards listed in Title 17 of the California Code of Regulations, Section 70200. However, vinyl chloride is not included in this section of the California Code of Regulations; therefore, the ARB does not make area designations for vinyl chloride.

²² *Ibid.*

The ARB has designated the Basin as an attainment area for CO₂,²³ SO₂, and sulfates,²⁴ and as an unclassified area for hydrogen sulfide,²⁵ and an attainment or unclassified area for NO₂, SO₂, Pb, and visibility-reducing particles.²⁶ The ARB has not established area designations for vinyl chloride. The ARB has designated the Basin as a nonattainment area for O₃, NO₂, PM₁₀, and PM_{2.5}.²⁷ The ARB has designated the Los Angeles County portion of the Basin as a nonattainment area for lead.²⁸ For areas classified as nonattainment, the CCAA requires that the SCAQMD prepare an air quality management plan with specific emission reduction strategies, and to meet specified milestones in implementing emission controls to achieve more healthful air. New control strategies are to include an indirect and area source control program, best available retrofit control technology for existing sources, a program to mitigate all emissions from new and modified permitted stationary sources (no net increase), transportation control measures, and substantial use of low-emission vehicles (e.g., natural gas or methanol-powered vehicles). The CCAA also requires control measures to be ranked by priority and cost effectiveness. The air quality management plans must achieve a reduction in emissions of 5 percent or more per year, or 15 percent or more in a three-year period for pollutants causing severe nonattainment.

The ARB approved staff recommendations to amend the ozone standard on April 28, 2005, by adding a new 8-hour standard. On April 17, 2006, the state's 8-hour ozone standard was approved by the OAL, and became effective May 17, 2006. The new 8-hour state standard of 0.070 parts per million (ppm) is more stringent than the 8-hour federal standard of 0.0758 ppm.

In the early 1980s, the ARB established one of the nation's first comprehensive state air toxics programs. The Toxic Air Contaminant Identification and Control Act (Assembly Bill [AB] 1807–1983), Health and Safety Code Section 36950, et seq., created California's program to reduce the health risks from air toxics. This law expanded the ARB's authority to evaluate and control air toxics.

An additional state law, the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588–1987), Health and Safety Code Section 44300, et seq., supplements the original legislation by requiring a statewide air toxics inventory and notification of local residents of significant risk from nearby sources of air toxics. A 1992 amendment to the law (Senate Bill [SB] 1731; Health and Safety Code Section 44390, et seq.) requires that the risk be reduced from these significant sources.

²³ ~~California Air Resources Board. "State Area Designation Map: CO." [Online] 22 May 2006. <http://www.arb.ca.gov/degis/adm/s_co.htm>.~~

²⁴ ~~California Air Resources Board. "State Area Designation Map: Sulfates." [Online] 22 May 2006. <http://www.arb.ca.gov/degis/adm/s_sulfates.htm>.~~

²⁵ ~~California Air Resources Board. "State Area Designation Map: Hydrogen Sulfide." [Online] 22 May 2006. <http://www.arb.ca.gov/degis/adm/s_h2s.htm>.~~

²⁶ California Air Resources Board. "Area Designations Maps/State and NationalFederal." [Online] 7 September 2010~~22 May 2006~~. <<http://www.arb.ca.gov/degis/adm/adm.htm>>.

²⁷ Ibid.

²⁸ Ibid.

The goal of the ARB's Air Toxics Program is to protect the public health. It does this by reducing TACs that pose the highest risk to Californians. The ARB's program involves two separate steps. During the first step, risk assessment, the ARB identifies the highest risk substances (i.e., TACs). In the second or risk management step, the ARB and local air pollution control districts (APCD), such as the SCAQMD, investigate and adopt measures requiring air sources of TACs to minimize risk to public health.

The ARB maintains summaries and historical trends of TACs throughout the state, including the Basin.²⁹

(3) Southern California Association of Governments (SCAG)

SCAG is a council of governments for the Counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. As a regional planning agency, SCAG serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. SCAG also serves as the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews projects to analyze their impacts on SCAG's regional planning efforts.

Although SCAG is not an air quality management agency, it is responsible for several air quality planning issues. Specifically, as the designated Metropolitan Planning Organization (MPO) for the Southern California region, it is responsible, pursuant to Section 176(c) of the 1990 amendments to the CAA, for providing current population, employment, travel, and congestion projections for regional air quality planning efforts. It is required to quantify and document the demographic and employment factors influencing expected transportation demand, including land use forecasts. Pursuant to California Health and Safety Code Section 40460(b), SCAG is also responsible for preparing and approving the portions of the Basin's air quality management plans relating to demographic projections and integrated regional land use, housing, employment, and transportation programs, measures, and strategies. SCAG's method of accomplishing these requirements is through the preparation of demographic projections published in its 2001 RTP,³⁰ which was used by the SCAQMD in the preparation of its 2003 AQMP,³¹ discussed below. SCAG also prepared the 2004 RTP and 2006 Regional Transportation Improvement Program (RTIP), which form the basis for the transportation components of the 2007 AQMP and are utilized in the preparation of air quality forecasts and consistency analyses that are included in the 2007 AQMP.

²⁹ California Air Resources Board. "Air Quality Data Statistics." [Online] 22 December 2003. <http://www.arb.ca.gov/adam/welcome.html>.

³⁰ The 2001 RTP, which was used as the basis for the 2003 AQMP, is available for public inspection and review at the County of Los Angeles Department of Regional Planning, as stated above, and incorporated by this reference. As noted above, the 2001 RTP was revised and replaced by SCAG in 2004.

³¹ SCAQMD. 2003 Air Quality Management Plan. [Online] 22 December 2003. <<http://www.aqmd.gov/aqmp/AQMD03AQMP.htm>>, p. 3-9. The 2003 AQMP specifically states, "Demographic growth forecasts for various socioeconomic categories (e.g., population, housing, employment by industries), developed by SCAG for their 2001 RTP, were used to estimate future emissions."

(4) South Coast Air Quality Management District (SCAQMD)

The management of air quality in the Basin is the responsibility of the SCAQMD. This responsibility was given to SCAQMD by the California Legislature's adoption of the 1977 Lewis-Presley Air Quality Management Act (Health and Safety Code Section 40400, et seq.), which merged four County air pollution control bodies into one regional district. Under the Act, SCAQMD is responsible for bringing air quality in the areas under its jurisdiction into conformity with federal and state air quality standards. Specifically, SCAQMD is responsible for monitoring ambient air pollutant levels throughout the Basin and for developing and implementing attainment strategies to ensure that future emissions will be within federal and state standards.

(a) SCAQMD 2003 and 2007 AQMP

As discussed previously, the federal and state CAAs require the preparation of plans to bring air emissions within healthful levels. The SCAQMD has responded to this requirement by preparing a series of air quality management plans,³² including the 2003 and 2007 AQMPs, the most recent of which was adopted by the governing board on August 1, 2003. The purpose of the 2003 AQMP for the Basin (and those portions of the SSAB under the SCAQMD's jurisdiction) is to set forth a comprehensive program that will lead these areas into compliance with all federal and state air quality planning requirements.

~~Specifically, t~~The 2003 AQMP was designed to satisfy the CCAA tri-annual update requirements and fulfill the SCAQMD's commitment to update transportation emission budgets based on the latest approved motor vehicle emissions model and planning assumptions.³³ The purpose of the 2007 AQMP was to set forth a comprehensive program that will lead the Basin into compliance with federal and state air quality planning requirements for ozone and PM_{2.5}. In addition, as part of the 2007 AQMP, the SCAQMD requested U.S. EPA's approval of a "bump-up" to the "extreme" nonattainment classification of ozone, which would extend the attainment date from 2021 to 2024 and allow for the attainment demonstration to rely on emission reductions from measures that anticipate the development of new technologies or improvement of existing control technologies. The SCAQMD adopted the *Final 2007 Air Quality Management Plan (2007 AQMP)* on June 1, 2007. CARB approved the 2007 AQMP as the comprehensive SIP component for the Basin on September 27, 2007.

³² For example, the SCAQMD amended the 1997 AQMP in 1999 to address the U.S. EPA's proposed disapproval of the 1997 Ozone State Implementation Plan (SIP) revision and to ensure that the 1997 AQMP complied with or exceeded federal requirements. The 1999 AQMP amendments to the 1997 AQMP were subsequently approved by the U.S. EPA into the SIP in April 2000. The SCAQMD updated the PM₁₀ portion of the 1997 AQMP for both the Basin and Coachella Valley in 2002, as part of the district's request to extend the PM₁₀ attainment date from 2001 to 2006 for these areas as allowed under the federal CAA. The U.S. EPA approved the 2002 update on April 18, 2003. See, SCAQMD. 2003 AQMP. [Online] 22 December 2003. <http://www.aqmd.gov/aqmp/AQMD03AQMP.htm>, p. 1-1.

³³ *Ibid.*, p. 1-1.

The 2003 AQMP has been approved by the ARB, and it has been submitted to the U.S. EPA for review and approval as a SIP revision.

Success of the 2003 AQMP requires the cooperation of all levels of government: local, regional, state, and federal. Each level is represented in the 2003 AQMP by the appropriate agency or jurisdiction that has the authority over specific emissions sources, and for which each has specific planning and implementation responsibilities.³⁴

The overall control strategy for the 2003 AQMP is designed to meet applicable state and federal requirements, including attainment with ambient air quality standards. The focus of the 2003 AQMP was to demonstrate attainment with the federal PM₁₀ ambient air quality standard by 2006, and with the federal 1-hour ozone standard in 2010, while making expeditious progress toward attainment of state standards and upcoming new federal standards. Although the 2003 AQMP ~~does~~did not specifically address the new federal 8-hour ozone and PM_{2.5} standards, it is~~was~~ designed to make continued progress toward meeting these standards. The 2003 AQMP ~~relied~~s upon the most recent planning assumptions and the best available information, such as the ARB's EMFAC2002 for on-road mobile source emissions inventory, ARB's off-road model for off-road mobile source emission inventory, latest point source and improved area source inventories, as well as the use of the 1997 O₃ episodes, expanded air quality modeling analysis, and SCAG's forecast assumptions based on its 2001 RTP.³⁵

The 2003 AQMP was prepared to ensure compliance with the federal O₃ and PM₁₀ standards, to accommodate growth, to reduce the high levels of criteria pollutants within the Basin, to meet state and federal air quality standards, and to minimize the fiscal impact that pollution control measures have on the local economy. Principal control policies and measures for improving the Basin's air quality included extensive use of clean fuels, transportation control measures, market incentives, and facility permitting. Many of these policies and measures have been adopted as rules by the SCAQMD Governing Board or may be adopted as rules in the future.

The air quality levels projected in the 2003 AQMP ~~are~~were based on several assumptions. For example, the 2003 AQMP ~~has~~ assumed that development associated with general plans, specific plans, residential projects, and wastewater facilities will be constructed in accordance with population growth projections identified by SCAG in its 2001 RTP. The 2003 AQMP also ~~has~~ assumed that such development projects will implement strategies to reduce emissions generated during the construction and operational phases of development.

As stated above, the Basin was expected to reach attainment of the federal PM₁₀ ambient air quality standard in 2006 and the federal 1-hour ozone standard in 2010. According to the 2007 AQMP, the Basin met the PM₁₀ standards at all monitoring stations except for western Riverside where the annual PM₁₀

³⁴ *Ibid.*

³⁵ SCAQMD. 2003 Air Quality Management Plan. [Online] 22 December 2003. <http://www.aqmd.gov/aqmp/AQMD03AQMP.htm>, p. 4-1. <http://www.aqmd.gov/aqmp/AQMD03AQMP.htm>.

standard was not met as of 2006.³⁶ However, in December 2006, citing a lack of evidence linking health problems to long-term exposure to coarse particle pollution, the U.S. EPA revoked the annual PM₁₀ standard.³⁷ The 2007 AQMP demonstrated that the Basin would still exceed the 1-hour ozone standard in 2010 by more than 30 percent, despite the implementation of the AQMP's control measures.³⁸ However, in June 2005, the U.S. EPA revoked the 1-hour ozone standard for most areas, including the Basin, though a federal court ruling in 2006 required that previous nonattainment areas under the now revoked 1-hour ozone standard maintain New Source Review permitting, conformity, and other requirements for the 1-hour standard until the Basin achieves the current 8-hour ozone standard.³⁹

Additionally, the 2007 AQMP focuses on attainment strategies for the 8-hour ozone and PM_{2.5} standards through stricter control of sulfur oxides and directly emitted PM_{2.5}, NO_x, and VOCs. Although PM_{2.5} plans for nonattainment areas were due in April 2008, the SCAQMD integrated PM_{2.5} and ozone reduction control measures and strategies in the 2007 AQMP. The need to commence PM_{2.5} control strategies before April 2008 was due to the attainment date for PM_{2.5} (2015) being much earlier than that for ozone (2024 for the extreme designation). Control measures and strategies for PM_{2.5} will also help control ozone generation in the region because PM_{2.5} and ozone share similar precursors (e.g., NO_x). In addition, the 2007 AQMP focuses on reducing VOC emissions, which were not reduced at the same rate as NO_x emissions in the past. Hence, the Basin has not achieved the reductions in ozone that were expected in previous AQMPs.

The 2007 AQMP relies upon the most recent planning assumptions and the best available information, such as the ARB's EMFAC2007 for the on-road mobile source emissions inventory, ARB's off-road model for the off-road mobile source emissions inventory, the latest point source and improved area source inventories, as well as the use of new O₃ episodes and air quality modeling analysis, and SCAG's forecast assumptions based on its 2004 RTP.⁴⁰ The project's consistency with the 2003 and 2007 AQMP is discussed later in this EIR section.

(b) SCAQMD Rules and Regulations

The SCAQMD is responsible for limiting the amount of emissions that can be generated throughout the Basin by various stationary, area, and mobile sources. Specific rules and regulations have been adopted by the SCAQMD Governing Board that limit the emissions that can be generated by various uses and/or activities, and that identify specific pollution reduction measures which must be implemented in association with various uses and activities. These rules not only regulate the emissions of the federal

³⁶ SCAQMD, *Final 2007 Air Quality Management Plan*, (Diamond Bar, California: SCAQMD, June 2007), p. ES-4.

³⁷ U.S. Environmental Protection Agency. "PM Standards." [Online] 30 September 2010. <<http://www.epa.gov/pm/standards.html>>.

³⁸ SCAQMD, *Final 2007 Air Quality Management Plan*, (Diamond Bar, California: SCAQMD, June 2007), p. ES-4.

³⁹ *South Coast Air Quality Management Dist. v. EPA*, 472 F.3d 882 (D.C. Cir. 2006).

⁴⁰ SCAQMD, *Final 2007 Air Quality Management Plan*, (Diamond Bar, California: SCAQMD, June 2007), p. 4-1.

and state criteria pollutants, but also TACs and acutely hazardous materials.⁴¹ The rules are subject to ongoing refinement by SCAQMD.

In particular, stationary emissions sources subject to these rules are regulated through SCAQMD's permitting process. Through this permitting process, SCAQMD also monitors the amount of stationary emissions being generated and uses this information in developing the AQMP. The proposed project would be subject to SCAQMD rules and regulations to reduce specific emissions and to mitigate potential air quality impacts.

(c) **SCAQMD's CEQA Air Quality Handbook**

In April 1993, the SCAQMD prepared the *CEQA Air Quality Handbook* to assist local government agencies and consultants in preparing air quality impact analyses for projects subject to CEQA. It was later updated in November 1993 and is presently being updated by the district. The *CEQA Air Quality Handbook* is an advisory document and local jurisdictions are not required to utilize the methodology outlined therein, but it does describe the criteria that SCAQMD uses when reviewing and commenting on the adequacy of environmental documents, such as this EIR. It recommends thresholds for determining whether or not projects would have significant adverse environmental impacts, identifies methodologies for predicting project emissions and impacts, and identifies mitigation measures to avoid or reduce air quality impacts. Although the *CEQA Air Quality Handbook* has been adopted by the Governing Board of the SCAQMD, it does not, nor does it intend to, supersede a local jurisdiction's CEQA procedures.

The *CEQA Air Quality Handbook*, last published in November 1993, is currently undergoing revision. The updated and revised document is referred to by the SCAQMD as the *Air Quality Analysis Guidance Handbook*. As of ~~January 2010~~ ~~May 2006~~,⁴² several sections of the *Air Quality Analysis Guidance Handbook* had been prepared, including revised significance thresholds and emission factors, air toxics analysis methodologies, and recommended mitigation measures. This EIR section was prepared following the recommendations of the SCAQMD found in the *CEQA Air Quality Handbook* and the revised sections of

⁴¹ Assembly Bill 1807 (AB 1807) (Stats. 1983, Ch. 1047; Health and Safety Code Section 39650, et seq., Food and Agriculture Code Section 14021, et seq.), enacted in September 1983, sets forth a procedure for the identification and control of toxic air contaminants (TAC) in California. According to those statutes, the ARB is responsible for the identification and control of TACs, as discussed above. AB 1807 defines a TAC as an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health (Health and Safety Code Section 39655a). California Air Resources Board. "Toxic Air Contaminant Staff Report/Executive Summaries." [Online] 2 February 2004. <<http://www.arb.ca.gov/toxics/id/summary/summary.htm>>.

⁴² The most recently prepared and revised sections of the *Air Quality Analysis Guidance Handbook* are available for public inspection and review at the County of Los Angeles Department of Regional Planning, and incorporated by this reference.

the *Air Quality Analysis Guidance Handbook*, as well as more current recommendations for air quality modeling.⁴³

(d) Santa Clarita Subregional Analysis

In November 2004, SCAQMD prepared a subregional analysis for the Santa Clarita Valley. The purpose of the subregional analysis is to identify disproportionate air quality impacts in a specific geographic area, and if found, to address and mitigate these impacts. With regard to future development, the analysis concluded that:

- When simultaneous 25-year buildout of all recorded, pending and approved land parcels in the City and County portions of the valley is assumed, simulated annual PM₁₀ impact is projected to increase up to 5 micrograms per cubic meter;
- The maximum regional annual average PM₁₀ impact is projected to occur near Newhall Ranch; and
- Future development would not cause violations of the federal annual average PM₁₀ standard, but could cause possible violations of the state standard.
- The overwhelming contribution of pollution transport to the Santa Clarita Valley comes from the San Fernando Valley and metropolitan Los Angeles. The major daytime wind vectors are from the south and upwind emission source areas. Additionally, field studies have confirmed the prevalent transport route through the Newhall Pass by tracing the northward movement of inert tracer gases released in the Metropolitan Los Angeles areas. As an example, Santa Clarita is a relatively small contributor to the total emissions of the key pollutants in both Los Angeles county and the Basin as a whole. The report indicates that across the board, the emissions are typically less than three percent of the County total and 2 percent of the basin total.

(5) Local Governments

Local governments, such as the County of Los Angeles, have the authority and responsibility to reduce air pollution through their police power and land use decision-making authority. Specifically, local governments are responsible for the mitigation of emissions resulting from land use decisions and for the implementation of transportation control measures as outlined in the 2007~~3~~ AQMP. The 2007~~3~~ AQMP assigns local governments certain responsibilities to assist the Basin in meeting air quality goals and policies. In general, a first step toward implementing a local government's responsibility is accomplished by identifying air quality goals, policies, and implementation measures in its General Plan. Through capital improvement programs, local governments can fund infrastructure that contributes to improved air quality, by requiring such improvements as bus turnouts, energy-efficient streetlights, and synchronized traffic signals. In accordance with CEQA requirements and the CEQA review process, local governments assess the air quality impacts of projects they undertake or that occur within their

⁴³ ~~SCAQMD recommends use of URBEMIS2002 as an alternative air quality model. Personal communication with Charles Blankson, Ph.D., SCAQMD, Diamond Bar, California, 8 November 2002.~~

jurisdictions, require mitigation of potential air quality impacts by conditioning discretionary permits, and monitor and enforce implementation of such mitigation.⁴⁴

5. EXISTING CONDITIONS

a. Regional Climate⁴⁵

The regional climate significantly influences the air quality in the Basin. Temperature, wind, humidity, precipitation, and even the amount of sunshine influence the quality of the air. In addition, the Basin is frequently subjected to an inversion layer that traps air pollutants. Temperature has an important influence on Basin wind flow, pollutant dispersion, vertical mixing, and photochemistry.

Annual average temperatures throughout the Basin vary from the low to middle 60 degrees Fahrenheit (°F). However, due to decreased marine influence, the eastern portion of the Basin shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the Basin, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the Basin have recorded maximum temperatures above 100°F.

Although the climate of the Basin can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of Basin climate. Humidity restricts visibility in the Basin, and the conversion of SO₂ to SO₄ is heightened in air with high relative humidity. The marine layer is an excellent environment for that conversion process, especially during the spring and summer months. The annual average relative humidity is 71 percent along the coast, and 59 percent inland. Because the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.

More than 90 percent of the Basin's rainfall occurs from November through April (see **Table 4.9-1, Average Monthly Temperatures and Precipitation for Los Angeles International Airport, CA, 1944~~61~~–2009~~1990~~**). Annual average rainfall varies from approximately 9 inches in Riverside to 14 inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thundershowers near the coast and slightly heavier shower activity in the eastern portion of the region and near the mountains. Rainy days comprise 5 to 10 percent of all days in the Basin with the frequency being higher near the coast. The influence of rainfall on the contaminant levels in the Basin is minimal. Although some washout of pollution would be expected with winter rains, air masses that bring precipitation of consequence are very unstable and provide excellent dispersion that

⁴⁴ SCAQMD, *CEQA Air Quality Handbook*, (Diamond Bar, California: SCAQMD, April 1993), p. 2-2; *Air Quality Guidance Handbook* (July 1999) pp. 2-8–2-10. The *Air Quality Guidance Handbook* may be reviewed online at <http://www.aqmd.gov/ceqa/hdbk.html>.

⁴⁵ The information contained in this section, unless otherwise noted, primarily is derived from Appendix 8 to the *CEQA Air Quality Handbook*.

masks wash-out effects. Summer thunderstorm activity affects pollution only to a limited degree. If the inversion is not broken by a major weather system, high contaminant levels can persist even in areas of light showers. However, heavy clouds associated with summer storms minimize O₃ production because of reduced sunshine and cooler temperatures.

Table 4.9-1
Average Monthly Temperatures and Precipitation for
Los Angeles International Airport, CA, ~~1944-1961~~–2009-1990

Month	Mean Daily Temperatures (°F)		Mean Monthly Precipitation
	Maximum	Minimum	
January	65	47	<u>2.682.40</u>
February	65.66	49	<u>2.722.51</u>
March	65	50	<u>1.841.98</u>
April	68	53	<u>0.760.72</u>
May	69	56	<u>0.170.14</u>
June	72	60	<u>0.050.03</u>
July	75	63	<u>0.020.01</u>
August	76	64	<u>0.070.15</u>
September	76	63	<u>0.160.31</u>
October	74	59	<u>0.370.34</u>
November	<u>70.71</u>	52	<u>1.411.76</u>
December	66	48	<u>1.731.66</u>
<u>Annual</u>	110 (high)	<u>27.23</u> (low)	<u>11.9912.01</u> (total)

Source: California Climate Data Archive, National Weather Service Cooperative Network, Newhall, California, Station 045114, 1999 Local Climatological Data, Annual Summary with Comparative Data, Los Angeles, California, International Airport.

Due to the generally clear weather, about 75 percent of available sunshine is received in the Basin. Clouds absorb the remaining 25 percent. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year there are approximately 10 hours of possible sunshine, and approximately 14 hours on the longest day of the year. The percentage of cloud cover during daylight hours varies from 47 percent at Los Angeles International Airport (LAX) to 35 percent at Sanberg, a mountain location. The number of clear days also increases with distance from the coast: 145 days at LAX and 186 days at Burbank.⁴⁶ The Basin typically receives much less sunshine during the first six months of the year than the last six months. This difference is attributed to the greater frequency of deep marine layers and the subsequent increase in stratus clouds during the spring and to the fact that the rainy season begins late in the year (November) and continues through early spring.

⁴⁶ 1999 Local Climatological Data, Annual Summary with Comparative Data, Los Angeles, California, International Airport. National Oceanic and Atmospheric Administration.

As this heating continues, the temperature of the surface layer approaches the temperature of the base of the inversion layer. When these temperatures become equal, the inversion layer's lower edge begins to erode and, if enough warming occurs, the layer breaks up. The surface layers are gradually mixed upward, diluting the previously trapped pollutants. The breakup of inversion layers frequently occurs during mid to late afternoon on hot summer days. Winter inversions usually break up by mid morning.

Conditions possibly affecting regional climate conditions include global warming. As discussed in Chapter 3 of the AQMD [Air Quality Guidance Handbook](#) Guidelines:

Stratospheric ozone depletion" refers to the slow destruction of naturally occurring ozone, which lies in the upper atmosphere (called the stratosphere) and which protects Earth from the damaging effects of solar ultraviolet radiation. Figure 3-4 ([South Coast Air Quality Management District](#)) illustrates these reactions.

Certain compounds, including chlorofluorocarbons (CFCs,) halons, carbon tetrachloride, methyl chloroform, and other halogenated compounds, accumulate in the lower atmosphere and then gradually migrate into the stratosphere. In the stratosphere, these compounds participate in complex chemical reactions to destroy the upper ozone layer. Destruction of the ozone layer increases the penetration of ultraviolet radiation to the Earth's surface, a known risk factor that can increase the incidence of skin cancers and cataracts, contribute to crop and fish damage, and further degrade air quality.

Some gases in the atmosphere affect the Earth's heat balance by absorbing infrared radiation. This layer of gases in the atmosphere functions much the same as glass in a greenhouse (i.e., both prevent the escape of heat). This is why global warming is also known as the "greenhouse effect." Gases responsible for global warming and their relative contribution to the overall warming effect are carbon dioxide (55 percent), CFCs (24 percent), methane (15 percent), and nitrous oxide (6 percent). It is widely accepted that continued increases in greenhouse gases will contribute to global warming although there is uncertainty concerning the magnitude and timing of the warming trend.

Global warming gases and ozone-depleting gases include, but are not limited to, the following:

- *Carbon dioxide. Carbon dioxide is caused by fossil fuel combustion in stationary and mobile sources. It contributes to the greenhouse effect, but not to stratospheric ozone depletion. In the Basin, approximately 48 percent of carbon dioxide emissions come from transportation, residential and utility sources contribute approximately 13 percent each, 20 percent come from industry, and the remainder come from a variety of other sources.*
- *CFCs (chlorofluorocarbons). CFCs are emitted from blowing agents used in producing foam insulation. They are also used in air conditioners and refrigerators and as solvents to clean electronic microcircuits. CFCs are primary contributors to stratospheric ozone depletion and to global warming. Sixty-three percent of CFC emissions in the Basin come from the industrial sector (SCAQMD 1991).*

- *Halons. Halons are used in fire extinguishers and behave as both ozone-depleting and greenhouse gases.*
- *HCFCs (Hydro-chlorofluorocarbons). HCFCs are solvents, similar in use and chemical composition to CFCs. The hydrogen component makes HCFCs more chemically reactive than CFCs, allowing them to break down more quickly in the atmosphere.*
- *Methane. Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, and leaks in natural gas pipelines. It is a greenhouse gas and traps heat 40-70 times more effectively than carbon dioxide. In the Basin, more than 50 percent of human-induced methane emissions come from natural gas pipelines, while landfills contribute 24 percent.*
- *1,1,1-trichloroethane. 1,1,1-trichloroethane or methyl chloroform is a solvent and cleaning agent commonly used by manufacturers. It is less destructive of the environment than CFCs or HCFCs, but its continued use will contribute to global warming and ozone depletion.*

A detailed analysis of the proposed project's impacts relative to greenhouse gas emissions and global climate change is presented in this EIR at Section 4.23, Global Climate Change.

b. Regional Air Quality

In this subsection, year 2005~~4~~ regional air quality in the Basin monitored by the SCAQMD is compared to state and federal ambient air quality standards.⁴⁷ The following information, unless otherwise noted, is primarily derived from the SCAQMD's 2007~~3~~ AQMP, Chapter 2 – Air Quality and Health Effects, and Appendix II – Current Air Quality.⁴⁸

Air quality is determined primarily by the type and amount of contaminants emitted into the atmosphere, the size and topography of the air basin, and the meteorological conditions. The Basin has low mixing heights and light winds, which are conducive to the accumulation of air pollutants. Pollutants that impact air quality are generally divided into two categories, criteria pollutants (those for which health standards have been set), and TACs (those that cause cancer or have adverse human health effects other than cancer).

⁴⁷ ~~According to the SCAQMD's 2003 AQMP, complete data for the year 2002 was not available at the time the AQMP was prepared. SCAQMD. 2007~~3~~ Air Quality Management Plan. [Online] 27~~2~~ SeptemberDecember 2007~~3~~. <<http://www.aqmd.gov/aqmp/07aqmp/index.html>>, Chapter 2, p. 2 1, fn.1.~~

⁴⁸ ~~Ibid. SCAQMD. 2003 Air Quality Management Plan. [Online] 22 December 2003. <<http://www.aqmd.gov/aqmp/AQMD03AQMP.htm>>.~~

(1) Criteria Pollutants

The determination of whether a region's air quality is healthful or unhealthy is determined by comparing contaminant levels in ambient air samples to national and state standards. It is SCAQMD's responsibility to ensure that state and federal ambient air quality standards are met and maintained in the Basin. Health-based air quality standards established by California and the federal government apply to O₃, CO, NO₂, SO₂, PM₁₀, PM_{2.5}, and Pb. These standards were established to protect exposed sensitive receptors from adverse health effects with a margin of safety. The California standards are more stringent than the federal standards, and in the case of PM₁₀ and SO₂, the California standards are much more stringent. California has also established standards for sulfates, visibility reducing particles, hydrogen sulfide, and vinyl chloride. The state and national ambient air quality standards for each of the monitored pollutants and their effects on health are summarized in **Table 4.9-2, Ambient Air Quality Standards.**

**Table 4.9-2
Ambient Air Quality Standards¹**

Air Pollutant	Concentration/Averaging Time		Most Relevant Health Effects ²
	State Standard	Federal Primary Standard	
Ozone ¹	0.070 ppm, 8-hr avg. 0.09 ppm, 1-hr. avg.	0.075 0.08 ppm, 8-hr avg. (3-year average of annual 4th-highest daily maximum) 0.12 ppm, 1-hr avg. (revoked 6/15/05)	(a) Short-term exposures: (1) Pulmonary function decrements and localized lung edema in humans and animals, (b) (2) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) (b) Increased mortality risk; Long-term exposures: (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary-function decrements in chronically-exposed humans; (e) (e) Vegetation damage; and (f) (d) Property damage.
Carbon Monoxide	9.0 ppm, 8-hr avg. 20 ppm, 1-hr avg.	9 ppm, 8-hr avg. 35 ppm, 1-hr avg.	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses.
Nitrogen Dioxide ²	0.180 0.25 ppm, 1-hr avg. <u>0.030 ppm, annual arithmetic mean</u>	<u>0.100 ppm, 1-hr avg.</u> 0.0534 ppm, annual arithmetic mean	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration.
Sulfur Dioxide	0.04 ppm, 24-hr avg. 0.25 ppm, 1-hr. avg.	0.030 ppm, annual arithmetic mean, 0.14 ppm, 24-hr avg.	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.
RespirableSuspended Particulate Matter (PM ₁₀)	20 µg/m ³ , annual arithmetic mean 50 µg/m ³ , 24-hr avg.	50 µg/m³, annual arithmetic mean 150 µg/m ³ , 24-hr avg.	(a) Excess deaths from short-term exposures and exacerbation of symptoms in sensitive patients with respiratory disease; (b) Excess seasonal declines in pulmonary function, especially in children.
FineSuspended Particulate Matter (PM _{2.5})	12 µg/m ³ , annual arithmetic mean	15 µg/m ³ , annual arithmetic mean (3-year average) 35 5 µg/m ³ , 24-hr avg. (3-year average of 98th	(a) Increased hospital admissions and emergency room visits for heart and lung disease; (b) Increased respiratory symptoms and disease; and (c) Decrease lung functions and premature death.

Air Pollutant	Concentration/Averaging Time		Most Relevant Health Effects ²
	State Standard	Federal Primary Standard (percentile)	
Sulfates	25 µg/m ³ , 24-hr avg.	None	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardiopulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage.
Lead ^{3,4*}	1.5 µg/m ³ , 30-day avg.	1.5 µg/m ³ , calendar quarterly average <u>0.15 µg/m³, rolling 3-month average</u>	(a) Increased body burden; (b) Impairment of blood formation and nerve conduction.
Visibility-Reducing Particles	In sufficient amount to reduce the visual range to less than 10 miles at relative humidity less than 70%, 8-hour avg. (10 AM–6 PM)	None	Visibility impairment on days when relative humidity is less than 70 percent.
Hydrogen Sulfide	0.03 ppm (42 µg/m ³), 1-hr avg.	None	Odor annoyance.
Vinyl Chloride*	0.01 ppm (26 µg/m ³), 24-hr avg.	None	Known carcinogen.

µg/m³ = micrograms per cubic meter.

ppm = parts per million by volume.

Sources: South Coast Air Quality Management District, Final Program Environmental Impact Report for the 2007 Air Quality Management Plan, (2007) Table 3.1-1, p. 3.1-3.

¹ California Air Resources Board. "Air Quality Standards." [Online] [May 15, 2003]. <<http://www.arb.ca.gov/aqs/aqs.htm>>

² South Coast Air Quality Management District. Final Program Environmental Impact Report to the 2003 Draft AQMP (Diamond Bar, California: SCAQMD, August 2003), Table 3.1-1, p. 3.1-2. This report may be reviewed on the SCAQMD website at http://www.aqmd.gov/ceqa/documents/2003/aqmd/finalEA/aqmp/AQMP_FEIR.html

µg/m³ = microgram per meter cubed.

ppm = parts per million.

¹ On March 12, 2008, the U.S. EPA revised the federal ozone standard from 0.08 ppm to 0.075 ppm. The standard became effective on May 27, 2008.

² On January 25, 2010, the U.S. EPA promulgated a new 1-hour NO₂ standard. The new 1-hour standard is 0.100 parts per million (188 micrograms per cubic meter) and became effective on April 12, 2010.

³ CARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

⁴ On October 15, 2008, the U.S. EPA revised the federal lead standard to include a concentration of 0.15 µg/m³ based on a 3-month rolling average.

* The ARB has identified lead and vinyl chloride as "toxic air contaminants" TACs with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Air quality of a region is considered to be in attainment of the state standards if the measured ambient air pollutant levels for O₃, CO, SO₂ (1- and 24-hour), NO₂, PM₁₀, PM_{2.5}, and visibility reducing particles are not exceeded, and all other standards are not equaled or exceeded at any time in any consecutive 3-year period. As stated above, in May 2007, the U.S. EPA redesignated the Basin as attainment for CO. The NAAQS (other than O₃, PM₁₀, PM_{2.5}, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O₃, PM₁₀, and PM_{2.5} are based on statistical calculations over one- to three-year periods, depending on the pollutant.

In 2005~~4~~, the Basin exceeded the federal standards for O₃, PM₁₀ and PM_{2.5} on a total of 8958 days overall. This compares to 128 days in 2003 and 94 days in 2004. Despite the substantial improvement over historical air quality in the past few decades, some areas in the Basin still exceeded the ~~1-hour~~ federal

standard for O₃ more frequently than any other area of the U.S. In 2005⁴⁹, ~~five~~⁹ out of 10 locations in the nation that exceeded the standard most frequently were located in the Basin.⁴⁹

(a) **Current Air Quality Summary**

The following information is derived primarily from the SCAQMD's 2007~~3~~ AQMP, Chapter 2 – Air Quality and Health Effects, and Appendix II – Current Air Quality, and presents a regional overview of the Basin's air quality status. The project ~~would be~~ is located in Source Receptor Area 13, Santa Clarita Valley, in northwest Los Angeles County. Ambient Air Monitoring Station No. 090 monitors pollutant concentrations for this Source Receptor Area.⁵⁰ ~~As will be demonstrated later on in this EIR section, the Santa Clarita Valley area, did not register any of the maximum pollutant concentrations measured for the Basin in 2001.~~

In 2005, the maximum ozone, PM₁₀ and PM_{2.5} concentrations continued to exceed federal standards by wide margins. Maximum 1-hour and 8-hour average ozone concentrations (0.182 ppm and 0.145 ppm, both recorded in Central San Bernardino Mountains areas) were 146 and 171 percent of the federal standard, respectively. Maximum 24-hour average and annual average PM₁₀ concentrations (131 µg/m³ recorded in South Coastal Los Angeles County area and 52.0 µg/m³ recorded in the Metropolitan Riverside County area) were 87 and 103 percent of the federal 24-hour and annual average standards, respectively. Maximum 24-hour average and annual average PM_{2.5} concentrations (132.7 µg/m³ recorded in East San Gabriel Valley area and 21.0 µg/m³ recorded in Metropolitan Riverside County area) were 203 and 139 percent of the federal 24-hour and annual average standards, respectively.

Carbon monoxide concentrations did not exceed the standards in 2005. The highest 8-hour average carbon monoxide concentration recorded (5.9 ppm in the South Central Los Angeles County area) was 62 percent of the federal carbon monoxide standard. The maximum annual average nitrogen dioxide concentration (0.0313 ppm recorded in the Northwest San Bernardino Valley area) was 59 percent of the federal standard. Concentrations of other pollutants remained well below the federal standards.~~In 2001, the maximum ozone, PM₁₀, and PM_{2.5} concentrations exceeded federal standards by wide margins. Maximum 1-hour and 8-hour average ozone concentrations recorded (0.190 ppm in East San Gabriel Valley and 0.144 ppm in Central and East San Bernardino Valley areas) were 152 and 169 percent of the federal standard, respectively. Maximum 24-hour average and annual average PM₁₀ concentrations (219 µg/m³ recorded in Banning Airport area and 63.1 µg/m³ recorded in the Metropolitan Riverside County area) were 146 and 125 percent of the federal 24-hour and annual average standards, respectively. Maximum 24-hour average and annual average PM_{2.5} concentrations (98.0 µg/m³ and 31.1 µg/m³, both recorded in Metropolitan Riverside County area) were, respectively, 150 and 201 percent of the federal 24-hour and annual average standards. CO concentrations did not exceed~~

⁴⁹ *Ibid.*, Chapter 2, p. 2-1, ~~fn.1~~.

⁵⁰ *Ibid.*, Appendix III, Table A-3, Figure A-1.

~~the standards in 2001.⁵¹ The highest 8-hour average CO concentration recorded (7.71 ppm in the South Central Los Angeles County area) was 81 percent of the federal 8-hour CO standard.~~

~~Concentrations of other pollutants remained below the standards. The maximum annual average nitrogen dioxide (NO₂) concentration (0.0419 ppm recorded in the East San Fernando Valley area) was 78 percent of the federal standard, and the maximum annual average sulfur dioxide (SO₂) concentration (0.0031 ppm recorded in Southwest Coastal Los Angeles County area) was 10 percent of the federal standard. The maximum sulfate concentration recorded (20.6 µg/m³ in Southwest Coastal Los Angeles County area) was 82 percent of the state sulfate standard. The maximum quarterly average lead concentration recorded at any SCAQMD air monitoring station was 8 percent of the federal standard. However, higher concentrations of lead (32 percent of the standard) were recorded at special monitoring sites immediately adjacent to stationary sources (in Central Los Angeles area).~~

~~The federal ozone standard was exceeded on a maximum of 26 days (seven percent of days in the Central San Bernardino Mountains area). Exceedances of the federal 24-hour PM₁₀ standard were recorded on a maximum of one day (two percent of days sampled at each of the locations in Banning Airport and Southwest San Bernardino Valley area), and the federal 24-hour PM_{2.5} standard was exceeded on a maximum of 19 days (6 percent of days sampled, in Metropolitan Riverside County area).⁵²~~

The following sections present summary information on health effects and how frequently, and by how much of a margin, different areas of the Basin exceeded the federal and state ambient air quality standards in 2005~~4~~.

(b) Ozone (O₃) Specific Information

O₃ is a highly reactive and unstable gas capable of damaging the respiratory tract. Please see the discussion of O₃, above in the **Subsection 4.a., Smog and Its Causes**, for more information and **Table 4.9-2, Ambient Air Quality Standards**, for a discussion of most relevant health effects.

(1) Air Quality

Regularly monitored O₃ concentrations at ~~298~~ locations in the Basin in 2005~~4~~ were below the stage 1 episode level (0.20 ppm), but the maximum concentrations in the Basin exceeded the health advisory level (0.15 ppm). **Table 4.9-3, 2005~~4~~ Maximum 1-Hour Ozone Concentrations by County**, and **Table 4.9-4, 2005~~4~~ Maximum 8-Hour Ozone Concentrations by County**, shows maximum 1-hour and 8-hour O₃ concentrations by County, respectively.

⁵¹ ~~Preliminary data from 2002 indicates one violation of CO, which is allowed under the CAA for attainment classification purpose.~~

⁵² SCAQMD. 2007~~3~~. AQMP. [Online] 27~~2~~. September~~December~~ 2007~~3~~. <<http://www.aqmd.gov/aqmp/07aqmp/index.html>>AQMD03AQMP.htm, pp. 2-5-2-6.

Table 4.9-3
2005~~1~~ Maximum 1-Hour Ozone Concentrations by County

County	Maximum 1-Hr Avg. (ppm)	Percent of Federal Standard*	Area
Los Angeles	<u>0.173</u> 0.190	<u>138</u> 152	<u>Santa Clarita Valley</u> East San Gabriel Valley
Orange	0.125	100	Saddleback Valley
Riverside	<u>0.149</u> 0.152	<u>119</u> 122	<u>Lake Elsinore</u> Perris Valley
San Bernardino	<u>0.182</u> 0.184	<u>146</u> 147	Central San Bernardino Valley

Source: SCAQMD, 2007~~3~~ AQMP (Diamond Bar, California: SCAQMD) September 27, 2007August 1, 2003, Chapter 2, p. 2-9. This document is also available for review at <http://www.aqmp.gov/aqmp/07aqmp/index.html>AQMD03AQMP.htm.

* Note: Based on the previous federal 1-hour ozone standard, which was revoked in 2005.

Table 4.9-4
2005~~1~~ Maximum 8-Hour Ozone Concentrations by County

County	Maximum 8-Hr Avg. (ppm)	Percent of Federal Standard	Area
Los Angeles	<u>0.141</u> 0.135	<u>166</u> 159	<u>Santa Clarita Valley</u> East San Gabriel Valley
Orange	<u>0.085</u> 0.098	<u>100</u> 115	Saddleback Valley
Riverside	<u>0.131</u> 0.136	<u>154</u> 160	<u>Banning Airport</u> Perris Valley
San Bernardino	<u>0.145</u> 0.144	<u>171</u> 169	Central San Bernardino MountainsValley, East San Bernardino Valley

Source: SCAQMD, 2007~~3~~ AQMP (Diamond Bar, California: SCAQMD) September 27, 2007August 1, 2003, Chapter 2, p. 2-9. This document is also available for review at <http://www.aqmd.gov/aqmp/07aqmp/index.html>AQMD03AQMP.htm.

As reported in the 2007 AQMP.:

The number of days exceeding the federal standards for ozone in the Basin varies widely by area... The 1-hour federal standard was not exceeded in areas along or near the coast, due in large part to the prevailing sea breeze which transports polluted air inland before high ozone concentrations can be reached. The standard was exceeded most frequently in the Central San Bernardino Mountains extending from Central San Bernardino Valleys through the Riverside-San Bernardino area in the east, and in the Santa Clarita Valleys in the west. The Central San Bernardino Mountains area recorded the greatest number of exceedances of the state standard (80 days), 1-hour and 8-hour federal standards (18 days and 69 days, respectively) and health advisory level (7 days).

The number of exceedances of the 8-hour federal ozone standard was also lowest at the coastal areas, increasing to a peak in the Riverside-San Bernardino Valley and adjacent mountain areas. The number of days exceeding the federal standard varied widely by area. Areas along or nearby the coast did not exceed the federal standard, due in large part to the prevailing sea breeze which transports polluted air inland before high ozone concentrations can be reached. The

standard was exceeded most frequently in the inland valleys extending from East San Gabriel Valley through the Riverside San Bernardino area, and in the adjacent mountains. The Central San Bernardino Mountains area recorded the greatest number of exceedances of the state standard (88 days), federal standard (26 days) and health advisory level (12 days).

*The number of exceedances of the 8-hour federal ozone standard was also lowest at the coastal areas, increasing to a peak in the Riverside San Bernardino Valley and adjacent mountain areas.*⁵³

(c) **Carbon Monoxide (CO) Specific Information**

“CO is a colorless, odorless gas. It results from the incomplete combustion of carbon-containing fuels such as gasoline or wood, and is emitted by a wide variety of combustion sources.”⁵⁴ Please see **Table 4.9-2, Ambient Air Quality Standards**, for a discussion of most relevant health effects.

(1) *Air Quality*

CO concentrations were measured at ~~253~~ locations in the Basin in ~~2005~~. **Table 4.9-5, 2005~~1~~ Maximum Carbon Monoxide Concentrations by County**, shows the ~~2005~~ maximum 8-hour average concentrations of CO by County.

**Table 4.9-5
2005~~1~~ Maximum Carbon Monoxide Concentrations by County**

County	Maximum 8-Hr Avg. (ppm)	Percent of Federal Standard	Area
Los Angeles	5.977	6281	South Central L.A. County
Orange	3.347	3549	Central Orange County, North Coastal Orange County
Riverside	2.645	2747	Metropolitan Riverside County
San Bernardino	3.433	3635	Central San Bernardino Valley

Source: SCAQMD, 2007~~3~~ AQMP (Diamond Bar, California: SCAQMD) ~~September 27, 2007~~ ~~August 1, 2003~~, Chapter 2, p. 2-16~~3~~. This document is also available for review at <http://www/aqmd.gov/aqmp/07aqmp/index.html>. ~~AQMD03AQMP.htm~~

Regarding the maximum 8-hour average CO concentrations in the Basin in ~~2005~~, higher concentrations were limited to the areas of the County where vehicular traffic is most dense, with the maximum concentration (~~5.9771~~ ppm) recorded in the South Central Los Angeles County area. ~~The Basin recorded the 6th highest maximum 8-hour average CO concentration in the nation in 2001. However, t~~The Basin

⁵³ *Ibid.*, pp. 2-89-2-910.

⁵⁴ California Air Resources Board. “Carbon Monoxide.” [Online] ~~248~~ ~~November~~ ~~January~~ 2009~~4~~. <<http://www.arb.ca.gov/research/aaqs/caaqs/co/co.htm>>.

met the CO standards in 2002, and in May 2007, the U.S. EPA redesignated the Basin as “attainment” for CO.

(d) Particulate Matter (PM₁₀ and PM_{2.5}) Specific Information

~~Suspended p~~Particulate matter (PM) is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials such as metals, soot, soil, and dust. ~~Inhalable~~ PM consists of ~~p~~Particles less than 10 microns or less in diameter, ~~and is~~ are defined as ‘respirablesuspended particulate matter’ or ‘PM₁₀.’ Fine particles are ~~less than~~ 2.5 microns or less in diameter (PM_{2.5}) {and can significantly contribute to regional haze and reduction of visibility in California}.⁵⁵

Please see **Table 4.9-2, Ambient Air Quality Standards**, for a discussion of most relevant health effects.

(1) Air Quality, PM₁₀

The SCAQMD monitored PM₁₀ concentrations at ~~2018~~ locations in ~~20051~~. Maximum 24-hour and annual average concentrations are shown in **Table 4.9-6, 20051 Maximum 24-hour Average PM₁₀ Concentrations by County**, and **Table 4.9-7, 20051 Maximum Annual Average PM₁₀ Concentrations by County**, respectively.

**Table 4.9-6
20051 Maximum 24-Hour Average PM₁₀ Concentrations by County**

County	Maximum 24-Hr Avg. (µg/m ³)	Percent of Federal Standard	Area
Los Angeles	131 106	87 70	<u>South Coastal Los Angeles County</u> <u>East San Gabriel Valley</u>
Orange	65 93	43 62	Central Orange County
Riverside	123 219	81 46	<u>Metropolitan Riverside County</u> <u>Banning Airport</u>
San Bernardino	108 166	72 110	<u>Central</u> <u>Southwest San Bernardino Valley</u>

Source: SCAQMD, 20073 AQMP (Diamond Bar, California: SCAQMD) ~~September 27, 2007~~ August 1, 2003, Chapter 2, p. 125. This document is also available for review at <http://www.aqmd.gov/aqmp/07aqmp/index.html> ~~AQMD03AQMP.htm~~.

~~*Adjusted for high wind days in accordance with U.S. EPA's Natural Event Policy.~~

⁵⁵ California Air Resources Board. “Particulate Matter.” [Online] ~~258~~ April ~~January~~ 20054. <<http://www.arb.ca.gov/research/aaqs/caaqs/pm/pm.htm>>.

**Table 4.9-7
2005~~1~~ Maximum Annual Average PM₁₀ Concentrations by County**

County	Annual Average (µg/m ³)	Percent of Federal Standard	Area
Los Angeles	<u>43.4</u> 45.3	<u>86</u> 90	<u>South Coast Los Angeles County</u> East San Gabriel Valley
Orange	<u>28.2</u> 36.0	<u>56</u> 79	Central Orange County
Riverside	<u>52.0</u> 63.1	<u>103</u> 125	Metropolitan Riverside County
San Bernardino	<u>50.0</u> 52.4	<u>99</u> 104	<u>Central</u> Southwest San Bernardino Valley

Source: SCAQMD, 2007~~3~~ AQMP (Diamond Bar, California: SCAQMD) September 27, 2007~~August 1, 2003~~, Chapter 2, p. 12~~5~~. This document is also available for review at <http://www.aqmd.gov/aqmp/07aqmp/index.html>~~AQMD03AQMP.htm~~.

²~~Adjusted for the high wind days in accordance with U.S. EPA's Natural Event Policy.~~

As would be expected, higher concentrations of PM₁₀ associated with high winds in the inland valley areas were recorded in San Bernardino and Riverside Counties. As shown, the federal 24-hour standard was not exceeded in 2005; however, the much more stringent state standards were exceeded in most areas. ~~Data for samples collected on these high wind days were excluded from overall monitoring data in accordance with U.S. EPA's Natural Event Policy.~~

*The federal annual PM₁₀ standard was exceeded at only a few locations in the [SCAQMD] in the areas of Riverside and San Bernardino Counties in and around the Metropolitan Riverside County area and further inland in San Bernardino Valley areas. The federal 24-hour standard was also exceeded at two locations in Riverside and San Bernardino counties. The much more stringent state standards were exceeded in all areas of the Basin monitored in 2001.*⁵⁶

(2) Air Quality PM_{2.5}

The SCAQMD began regular monitoring of PM_{2.5} in 1999 following the EPA's adoption of the national PM_{2.5} standards in 1997. In 2005~~1~~, PM_{2.5} concentrations were monitored at 19~~8~~ locations throughout the SCAQMD. Maximum 24-hour and annual average concentrations are shown in **Table 4.9-8, 2005~~1~~ Maximum 24-hour Average PM_{2.5} Concentrations by County**, and **Table 4.9-9, 2005~~1~~ Maximum Annual Average PM_{2.5} Concentrations by County**, respectively. ~~Both 24-hour and annual PM_{2.5} standards were exceeded at most locations in the Basin.~~⁵⁷

⁵⁶ ~~Ibid.~~

⁵⁷ ~~Ibid.~~

Table 4.9-8
2005~~1~~ Maximum 24-Hour Average PM_{2.5} Concentrations by County

County	Maximum 24-Hr Avg. (µg/m ³)	Percent of Federal Standard	Area
Los Angeles	<u>132.794.7</u>	<u>203145</u>	East San Fernando Valley
Orange	<u>54.770.8</u>	<u>84108</u>	Central Orange County
Riverside	<u>98.798.0</u>	<u>151150</u>	Metropolitan Riverside County
San Bernardino	<u>106.378.5</u>	<u>162120</u>	Central San Bernardino Valley

Source: SCAQMD, 2007~~3~~ AQMP (Diamond Bar, California: SCAQMD) September 27, 2007~~August 1, 2003~~, Chapter 2, p. 2-136. This document is also available for review at <http://www.aqmd.gov/aqmp/07aqmp/index.html>~~AQMD03AQMP.htm~~.

Table 4.9-9
2005~~1~~ Maximum Annual Average PM_{2.5} Concentrations by County

County	Annual Average (µg/m ³)	Percent of Federal Standard	Area
Los Angeles	<u>18.126.1</u>	<u>120168</u>	<u>Central Los Angeles</u> South San Gabriel Valley
Orange	<u>14.722.4</u>	<u>97445</u>	Central Orange County
Riverside	<u>21.031.1</u>	<u>139201</u>	Metropolitan Riverside County
San Bernardino	<u>18.926.2</u>	<u>125169</u>	Southwest San Bernardino Valley, Central San Bernardino Valley

Source: SCAQMD, 2007~~3~~ AQMP (Diamond Bar, California: SCAQMD) September 27, 2007~~August 1, 2003~~, Chapter 2, p. 2-136. This document is also available for review at <http://www.aqmd.gov/aqmp/07aqmp/index.html>~~AQMD03AQMP.htm~~.

PM_{2.5} concentrations were higher in the inland valley areas of San Bernardino and Metropolitan Riverside counties, but were also high in the metropolitan areas of Los Angeles County and central Orange County. The high PM_{2.5} concentrations in Los Angeles County and Orange County are due to the secondary formation of smaller particulates generated by mobile and stationary source activities. PM₁₀ concentrations are normally higher due to windblown and fugitive dust emissions.⁵⁸

⁵⁸ SCAQMD. 2007 AQMP. [Online] 27 September 2007. <<http://www.aqmd.gov/aqmp/07aqmp/index.html>>~~Ibid.~~, p. 2-136.

(e) Nitrogen Dioxide (NO₂) Specific Information

Nitrogen dioxide (NO₂) is a reactive oxidizing gas capable of damaging cells lining the respiratory tract. This pollutant is also an essential ingredient in the formation of ground-level O₃ pollution. NO₂ is one of the nitrogen oxides emitted from high-temperature combustion processes, such as those occurring in trucks, cars, and power plants. In the presence of sunlight, complex reactions of nitrogen oxides with ozone and other air pollutants produce the majority of NO₂ in the atmosphere. Indoors, Home heaters and gas stoves also produce substantial amounts of NO₂ in indoor settings.⁵⁹

Please see **Table 4.9-2, Ambient Air Quality Standards**, for a discussion of most relevant health effects.

Air Quality

In 2005~~4~~, NO₂ concentrations were monitored at 24~~3~~ locations in the SCAQMD. No area of the Basin exceeded the federal or state standards for NO₂. Maximum annual average concentrations for 2005~~4~~ are shown in **Table 4.9-10, 2001 Maximum Nitrogen Dioxide Concentrations by County**. The Basin has not exceeded the federal standard for NO₂ since 1991, when the Los Angeles County portion of the Basin recorded the last exceedance of the standard in any U.S. C~~o~~county.

The state standard was not exceeded at any SCAQMD monitoring location in 2005~~4~~. The highest 1-hour average concentration recorded (0.13~~25~~ ppm in Central Los Angeles East San Fernando Valley) was 50~~96~~ percent of the state standard.⁶⁰

Table 4.9-10
2005~~4~~ Maximum Nitrogen Dioxide Concentrations by County

County	Maximum Annual Avg. (ppm)	Percent of Federal Standard	Area
Los Angeles	0.031 24 49	5 8 78	<u>South Central Los Angeles County; Pomona/Walnut Valley East San Fernando Valley</u>
Orange	0.024 9 293	4 7 55	<u>North Central Orange County</u>
Riverside	0.022 2 247	4 1 46	Metropolitan Riverside County
San Bernardino	0.031 3 384	5 9 72	Northwest San Bernardino Valley

Source: SCAQMD, 2007~~3~~ AQMP (Diamond Bar, California: SCAQMD) September 27, 2007 August 1, 2003, Chapter 2, p. 2-17~~9~~. This document is also available for review at <http://www.aqmd.gov/aqmp/07aqmp/index.html>~~AQMD03AQMP.htm~~.

⁵⁹ California Air Resources Board. "Nitrogen Dioxide." [Online] 29~~8~~ November~~January~~ 2009~~4~~. <<http://www.arb.ca.gov/research/aaqs/caaqs/no2-1/no2-1.htm>>.

⁶⁰ SCAQMD. 2007 AQMP. [Online] 27 September 2007. <<http://www.aqmd.gov/aqmp/07aqmp/index.html>>, p. 2-17~~bid~~.

(f) Sulfur Dioxide (SO₂) Specific Information

A gaseous compound of sulfur and oxygen, SO₂ is formed when sulfur-containing fuel is burned by mobile sources, such as locomotives, ships, and off-road diesel equipment. SO₂ is also emitted during some industrial processes, such as petroleum refining and metal processing.⁶¹ Please see **Table 4.9-2, Ambient Air Quality Standards**, for a discussion of most relevant health effects.

(1) Air Quality

Monitored SO₂ concentrations in the SCAQMD remained within federal and state standards in 2005~~4~~. Although SO₂ concentrations remained well below the standards, SO₂ is a precursor to sulfate, which is a component of PM₁₀ and PM_{2.5}. Standards for both PM₁₀ and PM_{2.5} were both exceeded in 2005~~4~~.⁶² Maximum concentrations of SO₂ for 2005~~4~~ are shown in **Table 4.9-11, 2005~~4~~ Maximum Sulfur Dioxide Concentrations by County**.

Table 4.9-11
2005~~4~~ Maximum Sulfur Dioxide Concentrations by County

County	Maximum 24-hr Avg. (ppm)	Percent of Federal Standard	Area
Los Angeles	0.012	<u>98</u>	Southwest Coastal Los Angeles County, South Coastal Los Angeles County
Orange	0.008 7	<u>65</u>	North Coastal Orange County
Riverside	0.011	8	Metropolitan Riverside County
San Bernardino	0.004 10	<u>37</u>	Central San Bernardino Valley

Source: SCAQMD, 2007~~3~~ AQMP (Diamond Bar, California: SCAQMD) ~~September 27, 2007~~ August 1, 2003, Chapter 2, p. 2-18~~20~~. This document is also available for review at <http://www.aqmd.gov/aqmp/07aqmp/index.html> ~~AQMD03AQMP.htm~~. <http://www.aqmd.gov/aqmp/AQMD03AQMP.htm>.

(g) Sulfates (SO₄) Specific Information

Sulfates (SO₄²⁻) are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to sulfur dioxide (SO₂) during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO₂ to sulfates takes place

⁶¹ California Air Resources Board. "Sulfur Dioxide." [Online] 248 ~~November~~ January 2009~~4~~. <<http://www.arb.ca.gov/research/aaqs/caaqs/so2-1/so2-1.htm>>.

⁶² SCAQMD. 2007 AQMP. [Online] 27 September 2007. <<http://www.aqmd.gov/aqmp/07aqmp/index.html>> ~~Ibid.~~, pp. 2-18~~9~~ 2-20.

comparatively rapidly and completely in urban areas of California due to regional meteorological features.⁶³

Please see **Table 4.9-2, Ambient Air Quality Standards**, for a discussion of most relevant health effects.

(1) *Air Quality*

The state SO₄ standard was not exceeded anywhere in the Basin in 2005~~4~~ (see **Table 4.9-12, 2005~~4~~ Maximum Sulfate Concentrations by County**). Concentrations of SO₄ in the Basin have been historically well below the standard to the extent that some monitoring stations (i.e., Orange) have discontinued monitoring of the pollutant.

Table 4.9-12
2005~~4~~ Maximum Sulfate Concentrations by County

County	Maximum 24-hr Avg. (µg/m ³)	Percent of Federal Standard	Area
Los Angeles	<u>17.3</u> 20.6	<u>69</u> 82	Southwest Central Coastal Los Angeles County
Orange	N.D.	--	--
Riverside	<u>10.3</u> 10.7	<u>41</u> 43	Metropolitan Riverside County
San Bernardino	<u>10.9</u> 11.5	<u>44</u> 46	Central San Bernardino Valley

Source: SCAQMD, 2007~~3~~ AQMP (Diamond Bar, California: SCAQMD) September 27, 2007~~August 1, 2003~~, Chapter 2, p. 2-19~~24~~. This document is also available for review at <http://www.aqmd.gov/aqmp/07aqmp/index.html>~~http://www.aqmd.gov/aqmp/03AQMP.htm~~. N.D. = No Data. Historical measurements indicate concentrations are well below standards and monitoring has been discontinued.

(h) **Lead (Pb) Specific Information**

Pb is a relatively soft and chemically resistant metal. Pb forms compounds with both organic and inorganic substances. As an air pollutant, Pb is present in small particles. Sources of Pb emissions in California include a variety of industrial activities. Because it was emitted in large amounts from vehicles when leaded gasoline was used, Pb is present in many soils (especially urban soils) and can become re-suspended in the air.⁶⁴ Please see **Table 4.9-2, Ambient Air Quality Standards**, for a discussion of most relevant health effects.

⁶³ California Air Resources Board. "Sulfates." [Online] ~~248 November January 2009~~ 2004. <<http://www.arb.ca.gov/research/aaqs/caaqs/sulf-1/sulf-1.htm>>.

⁶⁴ California Air Resources Board. "Lead." [Online] ~~248 November January 2009~~ 2004. <<http://www.arb.ca.gov/research/aaqs/caaqs/pb-1/pb-1.htm>>.

(1) Air Quality

The federal and state standards for lead were not exceeded in any area of the [SCAQMD] in 2005~~4~~. There have been no violations of the standards at the [SCAQMD's] regular air monitoring stations since 1982, as a result of removal of lead from gasoline. However, special monitoring stations immediately adjacent to stationary sources of lead [(such as lead smelters and plating operations)] have recorded exceedances of the standards in ~~very~~ localized areas of the Basin as recently as 1991 for the federal standard and 1994 for the state standard. [Table 4.9-13, 2005~~4~~ Maximum Lead Concentrations by County] shows the maximum concentrations recorded in 2005~~4~~. The ~~maximum~~^{highest} ~~monthly and quarterly average lead concentrations~~ (0.44~~9~~ $\mu\text{g}/\text{m}^3$ and 0.34 $\mu\text{g}/\text{m}^3$ in Central Los Angeles), measured at special monitoring sites immediately adjacent to stationary sources of lead, ~~was~~^{were} ~~29 and 23~~^{29 and 23} percent of the federal standards, respectively.

The ~~maximum monthly average lead concentration at the regular monitoring stations (0.23 $\mu\text{g}/\text{m}^3$ in the South Central Los Angeles County area) was 15 percent of the state standard. The maximum at the special monitoring sites immediately adjacent to sources (0.57 $\mu\text{g}/\text{m}^3$ in Central Los Angeles) was 38 percent of the standard.~~⁶⁵

Table 4.9-13
2005~~4~~ Maximum Lead Concentrations by County

County	Maximum Quarterly Average ($\mu\text{g}/\text{m}^3$)	Percent of Federal Standard	Area
Los Angeles	0.034 2	28	South Central Los Angeles County
Orange	N.D.	--	--
Riverside	0.02 3	12	Metropolitan Riverside County
San Bernardino	0.02 4	13	Northwest San Bernardino Valley, Central San Bernardino Valley

Source: SCAQMD, 2007~~3~~ Air Quality Management Plan (Diamond Bar, California: SCAQMD) September 27, 2007~~August 1, 2003~~, Chapter 2, p. 2-20~~2~~. This document is also available for review at <http://www.aqmd.gov/aqmp/07aqmp/index.html>~~AQMD03AQMP.htm~~.
N.D. = No Data. Historical measurements indicate concentrations are well below standards.

(i) Hydrogen Sulfide (H₂S) Specific Information

Formed during bacterial decomposition of sulfur-containing organic substances, H₂S is a colorless gas with the odor of rotten eggs. It also can be present in sewer gas and some natural gas, and can be emitted

⁶⁵ SCAQMD. 2007 AQMP. [Online] 27 September 2007. <<http://www.aqmd.gov/aqmp/07aqmp/index.html>>~~Ibid.~~, p. 2-20~~2~~.

as the result of geothermal energy exploitation.⁶⁶ Please see **Table 4.9-2, Ambient Air Quality Standards**, for a discussion of most relevant health effects.

(i) Air Quality

The SCAQMD's monitoring stations throughout the Basin do not currently monitor this pollutant.⁶⁷

(j) Vinyl Chloride Specific Information

*Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.*⁶⁸

Please see **Table 4.9-2, Ambient Air Quality Standards**, for a discussion of most relevant health effects.

(i) Air Quality

The SCAQMD's monitoring stations throughout the Basin do not currently monitor this pollutant.⁶⁹

(k) Visibility-Reducing Particles Specific Information

*Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.*⁷⁰

Please see **Table 4.9-2, Ambient Air Quality Standards**, for a discussion of most relevant health effects.

⁶⁶ California Air Resources Board. "Hydrogen Sulfide." [Online] ~~2422 November~~ ~~December~~ 2009~~3~~. <<http://www.arb.ca.gov/research/aaqs/caaqs/h2s/h2s.htm>>.

⁶⁷ SCAQMD. ~~2007~~ ~~3~~ AQMP. [Online] ~~2722~~ ~~September~~ ~~December~~ 2007~~3~~. <<http://www.aqmd.gov/aqmp/07aqmp/index.html>~~AQMD03AQMP.htm~~>, Appendix II, Tables A-4-A-27~~2~~.

⁶⁸ California Air Resources Board. "Vinyl Chloride." [Online] ~~2422 November~~ ~~December~~ 2009~~3~~. <<http://www.arb.ca.gov/research/aaqs/caaqs/vc/vc.htm>>.

⁶⁹ SCAQMD. ~~2007~~ ~~3~~ AQMP. [Online] ~~2722~~ ~~September~~ ~~December~~ 2007~~3~~. <<http://www.aqmd.gov/aqmp/07aqmp/index.html>~~AQMD03AQMP.htm~~>, Appendix II, Tables A-4-A-27~~2~~.

⁷⁰ California Air Resources Board. "Visibility Reducing Particles." [Online] ~~2422 November~~ ~~December~~ 2009~~3~~. <<http://www.arb.ca.gov/research/aaqs/caaqs/vrp-1/vrp-1.htm>>.

(1) Air Quality

Although the SCAQMD's monitoring stations throughout the Basin do not directly monitor visibility-reducing particles, this pollutant is indirectly measured as PM₁₀ and PM_{2.5}.⁷¹

Since deterioration of visibility is one of the most obvious manifestations of air pollution and plays a major role in the public's perception of air quality, the State of California has adopted a standard for visibility or visual range. Until 1989, the standard was based on visibility estimates made by human observers, but the standard was changed that year to require measurement of visual range using instruments that measure light scattering and absorption by suspended particles. However, as noted above, the SCAQMD does not directly monitor visibility-reducing particles.⁷²

(I) Criteria Pollutant Emissions Inventory

SCAQMD's emissions inventory for the Basin from the 2007~~3~~ AQMP is summarized in **Table 4.9-14, Annual Average Emissions by Major Source Type for Baseline Year 20021997**. The emissions inventory for the anthropogenic (of human genesis) inventory is made up of stationary sources and mobile sources.

Table 4.9-14
Annual Average Emissions by Major Source Type for Baseline Year 20021997
(ton/day)

Source Category	TOG	VOC	CO	NO _x	SO _x	TSP	PM ₁₀	PM _{2.5}
Total Stationary and Area Sources	<u>583.34</u> 958.19	<u>302.36</u> 416.50	<u>126.54</u> 150.81	<u>92.59</u> 131.63	<u>21.74</u> 24.62	<u>442.22</u> 468.78	<u>226.84</u> 239.34	<u>60.07</u> 73.38
Total On-Road Vehicles	<u>395.42</u> 559.58	<u>361.62</u> 518.80	<u>3,676.85</u> 5,092.20	<u>628.30</u> 760.79	<u>4.26</u> 4.45	<u>25.08</u> 19.36	<u>24.79</u> 19.11	<u>18.13</u> 13.56
Total Other Mobile	-256.75	-236.55	-1,409.97	-311.97	-28.87	-21.00	-20.51	-18.27
Total	-1,774.53	-1,171.85	-6,652.99	-1,204.13	-57.94	-509.14	-278.96	105.21

Source: SCAQMD, 2007~~3~~ AQMP (Diamond Bar, California: SCAQMD) ~~September 27, 2007~~ August 1, 2003, Appendix III, Attachment A. This document is also available for review at <http://www.aqmd.gov/aqmp/07aqmp/index.html> ~~AQMD03AQMP.htm~~.

⁷¹ SCAQMD. 2007~~3~~ AQMP. [Online] ~~2722~~ September/December 2007~~3~~. <<http://www.aqmd.gov/aqmp/AQMD03AQMP.htm>>, Appendix II, Tables A-4-A-22.

⁷² California Air Resources Board. "Visibility Reducing Particles." [Online] 22 December 2003. <<http://www.arb.ca.gov/research/aaqs/caaqs/vrp-1/vrp-1.htm>>.

Stationary sources are grouped under the following categories: fuel combustion; waste disposal; cleaning and surface coatings; petroleum production and marketing; industrial processes; solvent evaporation; and other miscellaneous processes. Mobile sources are divided into two source categories: on-road and off-road mobile sources. On-road mobile sources include light-duty passenger vehicles; light-, medium-, and heavy-duty trucks; motorcycles; urban buses; school buses; and motor homes. Off-road mobile sources include off-road recreational vehicles, trains, ships, commercial boats, aircraft, and mobile equipment.⁷³

The SCAQMD emissions inventory includes emissions in the Basin of total organic gases (TOG), VOC, CO, NO_x, SO_x, total suspended solids (TSP), PM₁₀, and PM_{2.5}.⁷⁴ Since O₃ is formed by photochemical reactions involving the precursors VOC and NO_x, it is not inventoried. **Table 4.9-14** lists the ~~2002~~¹⁹⁹⁷ (most recent) inventory for the criteria pollutants (including PM_{2.5}) in the Basin.

As shown in **Table 4.9-14**, mobile sources are the major contributors to CO (~~97~~⁹² percent), NO_x (~~92~~⁸⁹ percent), SO_x (~~59~~⁵⁸ percent), and VOC (64 percent) emissions in the Basin. Stationary and area sources are the major contributors to PM₁₀ and PM_{2.5} emissions (~~83~~⁶ and ~~61~~⁷ percent, respectively).

Pb and vinyl chloride inventories for the Basin are shown in **Table 4.9-15**, ~~1998~~²⁰⁰⁵ **Annual Average Day Toxic Emissions for the South Coast Air Basin**. H₂S, as discussed above, is primarily related to odors and would be inventoried as a nuisance. Visibility reducing particles are indirectly discussed above in the context of PM₁₀ and PM_{2.5}. SO₄ are indirectly discussed above in the context of SO_x.

(2) Toxic Air Contaminants (TACs)

The following information has been obtained primarily from the SCAQMD's Multiple Air Toxics Exposure Study III (MATES III), described below. TACs typically emitted in the Basin include the contaminants listed in **Table 4.9-15**.

⁷³ SCAQMD. ~~2002~~²⁰⁰³ AQMP. [Online] ~~2722~~^{September} ~~December~~ ~~2002~~²⁰⁰³. <<http://www.aqmd.gov/aqmp/07aqmp/index.html>>, Appendix III, p. III-2-1.

⁷⁴ The ~~2002~~²⁰⁰³ AQMP presents emission levels in the Basin for the criteria air contaminants and their precursors. Specifically, data are included for emissions of VOC, NO_x, SO_x, CO, PM₁₀, and PM_{2.5}. O₃ is formed from photochemical reactions involving other air contaminants so it is not inventoried. NO_x and SO_x emissions are in the emissions inventory because multiple species of NO_x and SO_x contribute to the formation of NO₂, SO₂, particulate matter, and NO_x and VOC react in the presence of sunlight to produce ozone. VOC includes organic gases that contribute to ozone formation and exclude acetone, ethane, methane, methylene chloride, methylchloroform, perchloroethylene, methyl acetate, parachlorobenzotrifluoride, and a number of Freon-type gases. Important subsets of PM are PM₁₀ and PM_{2.5}. In the ~~2002~~²⁰⁰³ AQMP, the amount of VOC as a fraction of total organic gases and the amount of PM₁₀ and PM_{2.5} in PM are calculated for each process primarily using species and size fraction profiles provided by the ARB. SCAQMD. AQMP ~~2002~~²⁰⁰³. Appendix III, p. III-1-2. [Online] ~~2722~~^{September} ~~December~~ ~~2002~~²⁰⁰³. <<http://www.aqmd.gov/aqmp/07aqmp/index.html>> <<http://www.aqmd.gov/aqmp/07aqmp/index.html>> docs/2003AQMP_AppIII.pdf>.

(a) Cancer Risk

One of the primary health risks of concern due to exposure to TACs is the risk of contracting cancer. The carcinogenic potential of TACs is a particular public health concern because it is currently believed by many scientists that there is no “safe” level of exposure to carcinogens. In other words, any exposure to a carcinogen poses some risk of causing cancer. Health statistics show that one in four people will contract cancer over their lifetime, or 250,000 in a million, from all causes, including diet, genetic factors, and lifestyle choices. Approximately 2 percent of cancer deaths in the United States may be due to TACs.⁷⁵

As part of the SCAQMD’s environmental justice initiatives adopted in late 1997, the SCAQMD conducted the Multiple Air Toxics Exposure Study III (MATES III) between April 2004 and March 2006, which was a follow-up to previous MATES I and II air toxics studies conducted in the Southern California Air Basin. The MATES III Final Report was issued in September 2008.

The MATES III study, which is based on actual monitored data throughout the Basin, consisted of several elements. These included a monitoring program, an updated emissions inventory of TACs, and a modeling effort to characterize carcinogenic risk across the Basin from exposure to TACs. The MATES III study applied a 2-kilometer (1.24-mile) grid over the Basin and reported carcinogenic risk within each grid space (covering an area of 4 square kilometers or 1.54 square miles). The study concluded that the average of the modeled air toxics concentrations measured at each of the monitoring stations in the Basin equates to a background cancer risk of approximately 1,200 in 1,000,000, primarily due to diesel exhaust. The MATES III study also found lower ambient concentrations of most of the measured air toxics, as compared to the levels measured in the previous MATES II study conducted during 1998 and 1999. Specifically, benzene and 1,3-butadiene, which are pollutants generated primarily from vehicles, were down 50 percent and 73 percent, respectively.⁷⁶ The reductions were attributed to air quality control regulations and improved emission control technologies.

~~The MATES II, which is the most comprehensive study of urban toxic air pollution ever undertaken, shows that motor vehicles and other mobile sources of air pollution are the predominant source of cancer-causing air pollutants in the Basin.⁷⁷ The SCAQMD’s Governing Board directed staff to undertake the MATES II as part of the agency’s environmental justice initiatives adopted in late 1997. A panel of scientists from universities, an environmental group, businesses, and other government agencies helped design and guide the study. One goal of the study was to determine the cancer risk from toxic air~~

⁷⁵ Doll and Peto. “The Causes of Cancer: Qualitative Estimates of Avoidance of Risks of Cancer in the United States Today,” *Journal of the National Cancer Institute* (June 1981).

⁷⁶ SCAQMD, *Multiple Air Toxics Exposure Study in the South Coast Air Basin*, (Diamond Bar, California: SCAQMD, 2008), p. 2-7.

⁷⁷ SCAQMD, *Multiple Air Toxics Exposure Study II (MATES II)* (Diamond Bar, California: SCAQMD, March 2000), p. ES 3. <http://www.aqmd.gov/matesiidf/matestoc.htm>.

pollution throughout the area by monitoring toxics continually for one year at 10 monitoring sites. Another goal was to determine if there were any sites where TAC concentrations emitted by local industrial facilities were causing a disproportionate cancer burden on surrounding communities. To address this second goal, the SCAQMD monitored toxic pollutants at 14 sites for one month each with three mobile monitors. Monitoring platforms were placed in or near residential areas adjacent to clusters of facilities.⁷⁸ Although no TAC hotspots were identified, models show that elevated levels of toxic air pollutants can occur very close to facilities emitting TACs.⁷⁹

In the MATES II study, SCAQMD monitored more than 30 TACs at 24 sites over a 1-year period in 1999. The SCAQMD collected more than 4,500 air samples and, together with the CARB, performed more than 45,000 separate laboratory analyses of these samples. In the study, SCAQMD calculated cancer risk assuming seventy years of continuous exposure to monitored levels of pollutants.⁸⁰

The MATES II found that the average carcinogenic risk throughout the Basin is approximately 1,400 in one million ($1,400 \times 10^{-6}$). Diesel fueled mobile sources represent the greatest contributors to TAC emissions in the Basin.⁸¹

Table 4.9-15
1998 Annual Average Day Toxic Emissions for the South Coast Air Basin¹
(lbs/day)

Pollutant	On-Road	Off Road	Point	AB2588	Area	Total
Acetaldehyde ^a	5,485.8	5,770.3	33.9	57.1	189.1	11,536.2
Acetone ^{2b}	4,020.5 4,945.8	7,189.1 4,824.7	552.4 3,543.5	531.4	28,904.9 23,447.4	40,666.9 37,292.8
Benzene	13,244.8 21,945.5	7,808.3 6,533.4	906.5217.7	266.8	609.3 2,495.4	22,568.9 31,458.8
Butadiene [1,3]	2,723.1 4,033.8	1,755.6 1,566.1	537.16.7	2.0	108.7151.3	5,124.5 5,759.9
Carbon tetrachloride	0.0	0.0	11.28.8	1.8	0.0	11,240.6
Chloroform	0.0	0.0	206.90.0	35.5	0.0	206,935.5
Dichloromethane [1,1]	0.0	0.0	0.50.0	0.1	0.0	0.50.1
Dioxane [1,4]	0.0	0.0	0.80.0	105.0	0.70.0	1,5105.0
Ethylene dibromide	0.0	0.0	2.20.0	0.2	0.0	2,20.2
Ethylene dichloride	0.0	0.0	67.24.9	17.6	0.0	67,222.5
Ethylene oxide	0.0	0.0	16.158.1	12.3	52.6454.1	68,7524.4
Formaldehyde ^{2a}	12,596.6 16,664.9	19,889.0 16,499.3	1,488.8 521.6	674.7	1,302.0 1,107.5	35,276.4 35,468.0
Methyl Ethyl Ketone ^{2a}	745.6905.1	1,366.0	1,244.3	385.9	6,466.7	9,822.6

⁷⁸ *Ibid.*, p. ES 1.

⁷⁹ *Ibid.*, p. ES 6.

⁸⁰ *Ibid.*, pp. ES 1 ES 2.

⁸¹ *Ibid.*, p. ES 3, Fig. ES 2, p. ES 9.

Pollutant	On-Road	Off-Road	Point	AB2588	Area	Total
		906.9	3,240.2		14,535.4	19,973.5
Methylene chloride	0.0	0.0	<u>325.1</u> 1,378.6	1,673.6	<u>13,548.3</u> 94,21.7	<u>13,873.4</u> 12,473.9
Methyl tertiary butyl ether (MTBE)	<u>0.0</u> 58,428.9	<u>4,42,679.2</u>	<u>89,640.5</u>	434.4	<u>0,054,73.7</u>	<u>93.9</u> 67,056.7
Naphthalene	<u>573.4</u>	<u>376.8</u>	<u>16.6</u>		<u>568.1</u>	<u>1,534.9</u>
p-Dichlorobenzene	0.0	0.0	<u>115,40.0</u>	4.5	<u>5,553.9</u> <u>3,735.6</u>	<u>5,669.3</u> <u>3,740.1</u>
Perchloroethylene	0.0	0.0	<u>940.4</u> 4,622.0	2,249.1	<u>9,685.3</u> <u>22,813.1</u>	<u>10,625.7</u> <u>29,684.2</u>
Propylene oxide	0.0	0.0	<u>2,20.0</u>	22.3	<u>0,10.0</u>	<u>2,322.3</u>
Styrene	<u>681.7</u> 1,114.8	<u>326,3287.1</u>	<u>1,332.5</u> 447.0	3,836.7	<u>76,521.4</u>	<u>2,417.0</u> 5,707.0
Toluene	<u>37,707.9</u> 63,187.6	<u>15,369.2</u> 11,085.9	<u>8,724.3</u> 5,689.6	3,682.4	<u>21,029.4</u> 52,246.7	<u>82,830.8</u> 135,892.2
Trichloroethylene	0.0	0.0	<u>587,14.1</u>	58.0	<u>633.0</u> <u>2,550.3</u>	<u>1,220.1</u> <u>2,609.3</u>
Vinyl chloride	0.0	0.0	<u>51,10.0</u>	4.3	0.0	<u>51,14.3</u>
Arsenic	<u>0,20.1</u>	<u>3,90.3</u>	<u>13,42.7</u>	0.7	<u>24,821.4</u>	<u>42,325.2</u>
Cadmium	<u>1,51.6</u>	<u>2,11.5</u>	<u>3,20.5</u>	0.7	<u>7,227.5</u>	<u>14,031.8</u>
Chromium	<u>21,12.4</u>	<u>9,22.3</u>	<u>49,23.9</u>	2.2	<u>77,3302.2</u>	<u>156,8313.0</u>
Diesel particulate	<u>22,164.5</u> <u>23,906.3</u>	<u>37,406.2</u> <u>22,386.3</u>	<u>489,50.0</u>	5.4	<u>618,3815.3</u>	<u>60,678.5</u> <u>47113.4</u>
Elemental carbon ^{4e}	<u>10,498.2</u> <u>27,572.1</u>	<u>9,337.4</u> <u>6,690.3</u>	<u>4,850.4</u> <u>702.8</u>	0.0	<u>14,197.3</u> <u>16,770.5</u>	<u>38,883.3</u> <u>51,735.7</u>
Hexavalent chromium	<u>1,10.4</u>	<u>0,60.4</u>	<u>0,60.3</u>	1.0	<u>0,50.1</u>	<u>2,82.2</u>
Lead	<u>2,40.7</u>	<u>4,80.9</u>	<u>13,71.9</u>	24.5	<u>180.9</u> <u>1,016.3</u>	<u>201.8</u> <u>1,044.3</u>
Nickel	<u>15,32.5</u>	<u>5,82.2</u>	<u>44,22.9</u>	21.6	<u>23,485.6</u>	<u>88,7414.9</u>
Organic carbon	<u>19,972.7</u> <u>16,426.2</u>	<u>18,073.3</u> <u>153,81.8</u>	<u>371,00.0</u>	0.0	<u>69,230.1</u> <u>108,612.1</u>	<u>107,647.1</u> <u>140,420.2</u>
Selenium	<u>0,50.1</u>	<u>0,50.1</u>	<u>41,43.0</u>	5.7	<u>2,22.6</u>	<u>44,611.6</u>
Silicon ^{2d,b,e}	<u>838,768.6</u>	<u>136,567.6</u>	<u>1,211.9</u> <u>167.2</u>	0.0	<u>218,527.2</u> <u>248,614.0</u>	<u>220,714.3</u> <u>248,917.4</u>

Source: *South Coast Air Quality Management District, Multiple Air Toxics Exposure Study III, (2008) p. 3-8. This document is available for review at <http://www.aqmd.gov/prdas/matesIII/matesIII.html>. SCAQMD, Multiple Air Toxics Exposure Study II (Diamond Bar, California: SCAQMD) March 2000, Table 4.2.*

¹ Please refer to Chapter 3, *Development of the Toxics Emissions Inventory, of MATES III for a discussion on how each portion of the inventory was developed.*

^{2a} Primarily emitted emissions. These materials are also formed in the atmosphere as a result of photochemical reactions.

^{2b} Acetone and silicon are not toxic compounds. Their emissions are included in this table because they were measured in the sampling program and were subsequently modeled for the purpose of model evaluation.

^{4e} Includes elemental carbon from all sources (including diesel particulate).

(b) Non-Cancer Health Risks

For exposures to compounds that do pose a health risk, but not a cancer risk, it is believed that there is a threshold level of exposure to the compound below which it will not pose a health risk. The CalEPA and California Office of Environmental Health Hazard Assessment (OEHHA) have developed reference

exposure levels (REL) for non-carcinogenic TACs that are health-conservative estimates of the levels of exposure at or below which health effects are not expected. Comparing the estimated level of exposure to the REL assesses the non-cancer health risk due to exposure to a TAC. The comparison is expressed as the ratio of the estimated exposure level to the REL, referred to as the hazard index.⁸²

(c) Toxic Air Contaminants Inventory

The data available for TAC emissions inventories are not nearly as complete as the data for criteria pollutants. Starting in 1989, industrial facilities have been required to compile toxic emissions inventories under the Assembly Bill (AB) 2588 program. Companies subject to the program are required to report their TAC emissions to the SCAQMD.⁸³

The SCAQMD's first emissions inventory was compiled for thirty TACs for the year 1982, for stationary sources only. This inventory was updated during the preparation of the 1999 MATES II study and again for the MATES III study, which consisted of an evaluation and a characterization of ambient air toxics data in the Basin. The MATES III inventory is the most up-to-date inventory prepared by the SCAQMD. ~~It also estimated the cancer risk of several TACs. For the study, 20 of the original 30 pollutants were updated for the year 1998. Additionally, mobile source emissions for 12 of the 20 toxic pollutants were compiled. The stationary source data included 1,244 point sources and the mobile source inventory included only on road motor vehicles.~~ A summary of the ~~2005~~1998 emissions inventory is presented in **Table 4.9-15**, which provides the estimated toxic emissions for selected compounds, by source category.

c. Local Climate

The coastal area of the Basin is dominated by a semi-permanent, subtropical, Pacific high-pressure system. Generally mild, the climate is tempered by cool sea breezes, but may be infrequently interrupted by periods of extremely hot weather, passing winter storms, or Santa Ana winds. The project site is located further inland where the temperature is generally higher and the relative humidity lower than along the coast.

The project site is located in the transitional microclimatic zone of the Basin, which is located between two climatic types, termed valley marginal and high desert. Situated far enough from the ocean to usually escape coastal damp air and fog, the summers are hot and the winters are sunny and warm.

⁸² *Air Toxic Hot Spots Program Risk Assessment Guidelines*, Part III, Technical Support Document for the Determination of Noncancer Chronic Reference Exposure Levels, OEHHA (February 2000), p. 9.

⁸³ In September 1987, the California Legislature established the AB 2588 air toxics "Hot Spots" program. (Health and Safety Code Section 44300, et seq.). It requires facilities to report their air toxics emissions, ascertain health risks, and to notify nearby residents of significant risks. The emissions inventory and risk assessment information from this program has been incorporated into this report. In September 1992, the "Hot Spots" Act was amended by Senate Bill 1731, to require facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

Summer nights are pleasantly cool and the surrounding slopes drain off cold air near the ground on clear winter nights.

The Basin both transports and receives air pollutants from the coastal portions of Ventura and Santa Barbara counties that are located in the South Central Coast Air Basin, which also receives air pollutants from oil and gas development operations on the outer continental shelf.

Climate in the Santa Clarita Valley is relatively mild and annual average daytime temperatures range from 89.7 °F in summer to 63.6 °F in winter. Low temperatures average 58.9 °F in summer and 41.3 °F in winter. In wintertime during calm, clear nights, the localized mountain/valley wind patterns are enhanced and cool air blows down from the mountains towards the valley floor. Annual precipitation in the Santa Clarita Valley is 13.10 inches, which occurs almost exclusively from late October to early April. As elsewhere in the Basin, precipitation is higher in the mountains than in the valley. Portions of the Santa Susana and San Gabriel Mountains, which form the outer limits of the valley, receive between 22 and 24 inches of rainfall per year.

Predominant wind patterns for the greater Santa Clarita Valley area are typical for areas in which valleys and mountains are located in proximity to one another. During the day, onshore winds reach the valley and are enhanced by local topographical features. During the night, surface radiation cools the air in the mountains and hills, which flows down the valley, producing a gentle wind pattern (**Figure 4.9-2, Dominant Wind Patterns**). The predominant daytime wind flows from the south/southeast as the effects of the regional onshore flow are modified by the up-valley flow from the San Fernando Valley through the Newhall Pass. This pattern is most dominant during summer, the peak smog season. At night, local winds flow down the Santa Clara River Valley as winds flowing from the east.

d. Local Ambient Air Quality

(1) Source Receptor Area 13

To monitor the concentrations of the criteria pollutants, the SCAQMD has divided the Basin into source receptor areas (SRAs) where air quality monitoring stations are operated. The project site is located within SRA 13, which encompasses the Santa Clarita Valley west to the Ventura County line. The station that monitors this SRA (No. 090) is located approximately 6.5 miles southeast of the project site at 12th Street and Placerita Canyon Road.⁸⁴ This station presently only monitors pollutant concentrations of O₃, CO, NO₂, and PM₁₀.⁸⁵ No other station monitors air pollutant concentrations in the Santa Clarita Valley.

⁸⁴ CARB. "Air Quality Data Statistics." [Online] 2010. <<http://www.arb.ca.gov/adam/welcome.html>>. SCAQMD. 2003 AQMP. [Online] December 22, 2003. <<http://www.aqmd.gov/aqmp/AQMD03AQMP.htm>>, Appendix III, Attachment A, Table A 3 and Figure A 1.

⁸⁵ ~~Ibid.~~ As late as 1991, this station also monitored SO₂ pollutant concentrations for the Santa Clarita Valley. SCAQMD. 2003 AQMP. [Online] 22 December 2003. <<http://www.aqmd.gov/aqmp/AQMD03AQMP.htm>>, Appendix III, Tables A 4 – A 22.

PM_{2.5} and SO₂ are not monitored in SRA 13; ambient air quality data for these pollutants were obtained from the Reseda (SRA 6) and Burbank (SRA 7) monitoring stations, respectively.

Table 4.9-16, Ambient Pollutant Concentrations Registered in SRA 13, lists the ambient pollutant concentrations registered and the violations of state and federal standards that have occurred at the Santa Clarita monitoring station from 2006 through 20084.

As shown in **Table 4.9-16**, the Santa Clarita monitoring station has registered values above state and federal standards for O₃ and the state standard for PM₁₀. Concentrations of CO and NO₂ have not been exceeded within the Santa Clarita Valley in the period reported in **Table 4.9-16**, and concentrations of the other two criteria pollutants, SO₂ and Pb, have not been exceeded anywhere within the Basin since 1990, and since 1982, respectively.⁸⁶

⁸⁶ ~~SCAQMD. 2003 AQMP. [Online] 22 December 2003. <<http://www.aqmd.gov/aqmp/AQMD03AQMP.htm>>, Appendix III, Attachment A, Tables A-21 and A-22.~~

**Table 4.9-16
Ambient Pollutant Concentrations Registered in SRA 13**

Pollutant	Standards ^{1,2}	Year				
		2000	2001	20062002	20072003	20082004
SANTA CLARITA MONITORING STATION						
OZONE (O₃)						
Maximum 1-hour concentration monitored (ppm) ³		0.13	0.184	0.160 0.169	0.135 0.194	0.160 0.158
Maximum 8-hour concentration monitored (ppm)		0.111	0.129	0.120 0.145	0.110 0.152	0.131 0.133
Number of days exceeding federal standard	>0.12 ppm	1	9	32	35	13
Number of days exceeding state standard	>0.09 ppm	31	49	6281	3189	5469
Number of days exceeding state 8-hour standard	0.070 ppm			64	64	81
Number of days exceeding federal 8-hour standard ²	>0.0758 ppm	16	27	4056	1669	6052
Number of days exceeding Health Advisory	≥0.15 ppm	0	2	8	15	1
CARBON MONOXIDE (CO)						
Maximum 1-hour concentration monitored (ppm)		6	6	23	23	25
Maximum 8-hour concentration monitored (ppm)		4.9	3.14	1.31.9	1.21.7	1.13.7
Number of days exceeding federal 8-hour standard	≥9.05 ppm	0	0	0	0	0
Number of days exceeding state 8-hour standard	≥9.0 ppm	0	0	0	0	0
NITROGEN DIOXIDE (NO₂)						
Maximum 1-hour concentration monitored (ppm)		0.10	0.10	0.0840	0.0842	0.079
Annual average arithmetic mean concentration monitored (ppm)	>0.053 ppm	0.0246	0.0239	0.01820 0	0.02021	0.01620 4
Number of days exceeding state 1-hour standard ⁴	>0.1825 ppm	0	0	0	0	0
PARTICULATE MATTER (PM₁₀)						
Maximum 24-hour concentration (µg/m ³)		64	62	5361	13172	9154
Annual average concentration monitored (µg/m ³)		61	61	23.460	29.961	25.860
Number of samples						
Number of samples exceeding federal standard	>150 µg/m ³	0	0	0	0	0
Number of samples exceeding state standard	>50 µg/m ³	4	4	17	510	2
Percent of samples exceeding federal standard	>150 µg/m ³	0	0	0	0	0
Percent of samples exceeding state standard	>50 µg/m ³	7	7	11.7	16.4	3.3
PARTICULATE MATTER (PM_{2.5})^{4,5}						
Maximum 24-hr concentration (µg/m ³)		67.5	71.1	44.148.8	43.347.5	50.556.2
Annual average arithmetic mean concentration monitored (µg/m ³)		18.1	18.5	12.918.9	13.116.4	11.915.6
Number of samples exceeding federal 24-hr standard ⁵	>3565 µg/m ³	2	1	10	10	20
SULFUR DIOXIDE (SO₂)⁵						
Maximum 1-hr concentration (ppm)		0.010	0.013	0.013	0.013	0.024
Maximum 24-hr concentration monitored (ppm)		0.004	0.005	0.0047	0.0035	0.00340
Annual arithmetic mean concentration (ppm)		0.001	0.001	0.002	0.002	0.003
Number of days exceeding state 1-hour standard	>0.25 ppm	0	0	0	0	0
Number of days exceeding state 24-hour standard	>0.04 ppm	0	0	0	0	0
Number of days exceeding federal 24-hour standard	>0.14 ppm	0	0	0	0	0

Sources:

California Air Resource Board, "Air Quality Data Statistics," [Online] 2010. <http://www.arb.ca.gov/adam/welcome.html>.

South Coast Air Quality Management District, "Historical Data By Year," [Online] 2010. <http://www.aqmd.gov/smog/historicaldata.htm>.

(i) SCAQMD, Air Quality Data (for 2000, 2001, 2002, 2003, and 2004), (Diamond Bar, California: SCAQMD, 2000, 2001, 2002, 2003, and 2004). www.aqmd.gov/smog/historicaldata.htm.

(ii) U.S. Environmental Protection Agency Air Quality Database (for 2000, 2001, 2002, 2003, 2004), www.epa.gov/air/data/reports.html

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- ¹ Parts by volume per million of air (ppm), micrograms per cubic meter of air ($\mu\text{g}/\text{m}^3$), or annual arithmetic mean (aam).
- ² Federal and state standards are for the same time period as the maximum concentration measurement unless otherwise indicated.
- ³ The U.S. EPA revised the federal 8-hour O_3 standard from 0.08 ppm to 0.075 ppm, effective May 27, 2008. The statistics are based on the standard in effect at the time. The federal 1 hour standard was revoked on June 15, 2005. The data are shown for informational purposes.
- ⁴ CARB revised the state 1-hour NO_2 standard from 0.25 ppm to 0.18 ppm, effective March 20, 2008. The statistics are based on the standard in effect at the time. Pollutant is monitored at 18330 Gault Street in Reseda (SRA 6), which is the nearest monitoring station that monitors the particular pollutant.
- ⁵ The U.S. EPA revised the federal 24-hour $\text{PM}_{2.5}$ standard from 65 $\mu\text{g}/\text{m}^3$ to 35 $\mu\text{g}/\text{m}^3$ in 2006. The statistics are based on the standard in effect at the time. Pollutant is monitored at 228 West Palm Avenue in Burbank (SRA 7), which is the nearest monitoring station that monitors the particular pollutant.
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(2) Local Vicinity Emissions

The vicinity of the project site is characterized by undeveloped land to the north, west, and south, and Travel Village Recreational Vehicle (RV) Park to the east. State Route 126 (SR-126) forms the northern site boundary while, further to the north, is the Chiquita Canyon Sanitary Landfill. Elsewhere in the vicinity and within Newhall Ranch are oil and natural gas production operations. Emissions sources include stationary activities, such as space heating, cooking, and water heating; and mobile activities—primarily automobile and truck traffic along SR-126.

In addition, the Chiquita Canyon Landfill generates fugitive dust emissions during landfill covering operations and travel on dirt roads and surfaces, in the form of motor vehicle emissions, and methane gas. No liquid, radioactive, or hazardous wastes are accepted at the landfill, and the landfill does not accept untreated medical wastes, car batteries, or tires. Dust control at the landfill includes periodic watering of access roads, limiting the size of the active disposal area, applying and compacting daily cover. A gas management system to reduce odors and prevent gas migration was installed at the landfill in the early 1990s and is used to control methane gas, which is a naturally occurring product of waste decomposition. The gas is collected and burned at a single, enclosed flare stack located at the landfill.⁸⁷ Minor amounts of toxic air contaminants such as benzene, carbon tetrachloride, chloroform, dichlorobenzene, ethylene dichloride, perchloroethylene, and vinyl chloride are emitted by the landfill

⁸⁷ California Integrated Waste Management Board. "California MSW Landfill Methane Outreach Program Compilation." [Online] 2010. < <http://www.calrecycle.ca.gov/SWFacilities/TechServices/EmergingTech/LFGTEPrimer.pdf>>. Consolidated Disposal Service. "Chiquita Canyon Landfill—Landfill Info. Fact Sheet." [Online] 27 October 2004. <<http://www.consolidateddisposalservice.com/landinfo.htm>>.

flaring operations.⁸⁸ The EIR for the landfill expansion indicates that the location of maximum health risk associated with flaring operations for the expansion would be along the foothills south of the Santa Clara River,⁸⁹ but that the incremental excess cancer risk at this location would be 0.33 in one million, which is less than the SCAQMD's acceptable risk level of one in one million. No other sources of toxic air contaminants are located within 0.25 mile of the Landmark Village site.⁹⁰

The landfill is permitted by the California Environmental Protection Agency, the Regional Water Quality Control Board, Los Angeles Region, the Los Angeles County Department of Health Services, and the SCAQMD.⁹¹

Motor vehicles are the primary sources of pollutants within the project vicinity. Traffic-congested roadways and intersections that operate at Levels of Service (LOS) D, E, or F have the potential to generate localized high levels of CO within approximately 1,000 feet of a roadway. Localized areas where ambient concentrations exceed state and/or federal standards are termed CO "hotspots." Section 9.4 of the *CEQA Air Quality Handbook* identifies CO as a localized problem requiring additional analysis when a project is likely to subject sensitive receptors to CO hotspots.⁹² Sensitive receptors are populations that are more susceptible to the effects of air pollution than the population at large. The SCAQMD identifies the following as sensitive receptors: long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, child care centers, and athletic facilities.⁹³ As indicated in **Table 4.9-16**, above, CO concentrations are not an issue in SRA 13 and are not expected to be an issue in the project study area,⁹⁴ because the existing background

⁸⁸ Ogden Environmental and Energy Services, Draft Environmental Impact Report Chiquita Canyon Landfill Expansion and Resource Recovery Facilities (San Diego, California Los Angeles County Department of Regional Planning, May 1995), p. IV.G-23. According to Los Angeles County Department of Regional Planning Impact Analysis, this project (CUP 89-081) was approved and the EIR was certified by the Regional Planning Commission on September 11, 1996. The approval was appealed to the Board of Supervisors who sustained the approval in May 1997. CUP 89-081 was approved until November 2019. Koutnik, Daryl <dkoutnik@planning.co.la.ca.us>. "RE: Chiquita Canyon Landfill Expansion EIR." 25 October 2004. Rosemarie Mamaghani <rosem@impactsociences.com>.

⁸⁹ *Ibid.*, p. IV.G-34.

⁹⁰ According to the *CEQA Air Quality Handbook*, 0.25 mile is the distance which the SCAQMD uses in evaluating impacts on sensitive receptors, which include long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, child care centers, and athletic facilities. SCAQMD, *CEQA Air Quality Handbook*, (Diamond Bar, California: SCAQMD, April 1993), p. 5-1, Fig. 5-1; p. 5-7.

⁹¹ Chiquita Canyon. "Frequently Asked Questions." [Online] 2010. <<http://www.chiquitacanyon.com/faq.php>>. Consolidated Disposal Service. Chiquita Canyon Landfill – Landfill Info. Fact Sheet." [Online] 13 February 2004. <<http://www.consolidateddisposal.com/landinfo.htm>>.

⁹² SCAQMD, *CEQA Air Quality Handbook*, (Diamond Bar, California: SCAQMD, April 1993), p. 9-9.

⁹³ *Ibid.*, p. 5-1, Figure 5-1; p. 5-7.

⁹⁴ The project study area includes all intersections and roadways that could potentially be significantly impacted by project traffic.

concentrations for SRA 13 are well below the CO standards. However, a CO hotspots analysis was conducted for the project study areas to evaluate the potential for CO concentrations in exceedance of the state and federal standards. The CO hotspots analysis is presented later in this section in the **Operational Impacts** heading of the **Project Impacts** subsection.

In 2008~~2~~, the most recent year in which data is available from California Department of Transportation (CalTrans), peak hour vehicle mix along SR-126 at the Ventura/Los Angeles County line was composed of 89.478.1 percent passenger vehicles, 2.53.3 percent medium trucks, and 8.118.6 percent heavy trucks. Traffic along SR-126 west of Interstate 5 (I-5) was composed of 84.687.5 percent passenger vehicles, 3.23.7 percent medium trucks, and 12.28.7 percent heavy trucks.⁹⁵ According to the operator of the Chiquita Canyon Sanitary Landfill, approximately 466 vehicles (including heavy trucks and passenger vehicles) visit the landfill on a daily basis.

(3) Site-Specific Emissions

Aside from the agricultural operations and agricultural sheds on the project site, it is undeveloped. The agricultural operations generate fugitive dust from the cultivated soil and dirt roads, and emissions from the farm equipment when it is utilized on the site. The agricultural sheds generate stationary source emissions from space and water heating, and from the low volumes of vehicular traffic to and from the site.

6. PROPOSED PROJECT IMPROVEMENTS

The project applicant proposes residential, commercial, and recreational uses on the site, all of which would include sidewalks, bike lanes, trails, and trees that would shade buildings. The sidewalks, bike lanes, and trails would encourage alternative modes of travel in lieu of automobiles, while the shade trees would reduce the amount of energy required for air conditioning and the corresponding energy generation emissions. The Landmark Village project is required to implement, as applicable and feasible, those mitigation measures for air quality impacts that were required in the certified Newhall Ranch

⁹⁵ State of California Department of Transportation, *2008~~2~~ Annual Average Daily Truck Traffic on the California State Highway System*, (Sacramento, California: California Department of Transportation, September 2009~~February 2004~~), p. 202~~189~~.

Heavy trucks are all vehicles with three or more axles designed for the transportation of cargo; generally, the gross weight is greater than 12,000 kilograms (kg) (26,500 lbs.). Medium trucks are all vehicles with two axles and six wheels designed for transportation of cargo. Generally, the gross vehicle weight is greater than 4,500 kg (10,000 lbs.) and less than 12,000 kg (26,500 lbs.). Finally, passenger vehicles are all vehicles with two axles and four wheels designed primarily for transportation of nine or fewer passengers (automobiles). Lightweight trucks with a gross vehicular weight of less than 4,500 kg (10,000 lbs.) also fall into this passenger vehicle category.

Specific Plan Program EIR (May 2003). Implementation of these measures would directly and indirectly reduce the project's air emissions.

Landmark Village would facilitate the use of public transit by providing bus pull-ins along SR-126 and within the project site, and by reserving right-of-way for a future Metrolink line, space for a park-and-ride and/or Metrolink station. The project study area is served by the Santa Clarita Transit (SCT) system, which is operated by the City of Santa Clarita, and which largely serves the Santa Clarita Valley. SCT commuter buses provide regional service to downtown Los Angeles, the San Fernando Valley, and the Antelope Valley. SCT currently operates one fixed-route transit line (Route 2) near the project site. The route passes the project site via SR-126 and provides service to the greater Val Verde and Commerce Center areas. Additional routes, accessible from Route 2, provide service to the greater Santa Clarita Valley area.⁹⁶

Metrolink, operated by the Southern California Regional Rail Authority (SCRRA), provides commuter rail service between the Antelope Valley and Downtown Los Angeles, and also links Ventura, Los Angeles, San Bernardino, Riverside, Orange, and San Diego Counties with convenient transfer service between the bus and rail systems. The closest Metrolink station to the project site is located along Soledad Canyon Road east of Bouquet Canyon Road. An eventual Metrolink extension along the SR-126 corridor to Ventura County ~~may be~~ is part of the long-range transit plans ~~prepared by Ventura County, the City of Santa Clarita, and SCAG, although none of the applicable transportation planning agency documents refers to or includes plans or funding for any such project. Nonetheless,~~ land within Newhall Ranch is set aside for the rail right-of-way, and a park-and-ride and/or train station.

⁹⁶ City of Santa Clarita Transit. "Routes and Schedules." [Online] 201025—October—2004. <<http://www.santaclaritatransit.com/Index.aspx?page=3>>. ~~http://www.santaclarita.com/cityhall/field/transit/routes & schedules.asp.~~

Using data from April 2007⁹⁴, average weekday ridership on the Antelope Valley Line of the Metrolink, which serves the Santa Clarita Valley, was 7,302,614 people,⁹⁷ with approximately 17.95 percent boarding at the Santa Clarita station on Soledad Canyon Road.⁹⁸ According to Metrolink management, the overall regional system has removed 25,675,249 cars per weekday from regional roadways, which represents 1.32.9 percent of the equivalent peak hour lane miles on freeway traffic on freeways that run parallel to the Metrolink lines.⁹⁹ The use of these mass transit facilities has helped to reduce roadway congestion, fuel consumption, and air emissions within the region.

The project site is also within 5 miles of existing job centers (e.g., Valencia Commerce Center, Valencia Industrial Center, Corporate Center, Valencia Gateway, Centre Point Business Park, Rye Canyon Business Park, Valencia Market Place, and Town Center) that provide employment opportunities to many Santa Clarita Valley residents. Furthermore, the project itself is expected to generate a portion of the 19,320 employment opportunities projected at buildout of the Newhall Ranch Specific Plan. Because of the proximity of project residences to existing and future job centers, future project residents would not have to commute to more distant employment centers in the San Fernando Valley, Ventura County, or beyond. Because the Landmark Village project has been designed to provide future residents of the site with a range of on-site employment opportunities and services, including parks, schools, and retail shopping areas, and is promoting efficient means of access to these uses, VMT and air pollutant emissions can be reduced when compared with a community designed without such a balance of land uses, thereby helping to reduce longer commutes to more distant employment centers in Ventura County, the San Fernando Valley and beyond. As a result of reduced commutes, VMT and, consequently, air pollutant emissions, can be further reduced.

Project residences would also be linked to various employment, shopping, and recreation areas within the site through the community trails and paseos, and within the remainder of Newhall Ranch as it builds out.

⁹⁷ Metrolink. "Facts and Timeline: Our Story." [Online] 20 August 2003. <http://www.metrolinktrains.com/about/facts_and_timeline.asp>. The Antelope Valley Line has nine stations that run from Lancaster to Glendale.

⁹⁸ Metrolink. "Antelope Valley Line: 2007 Weekday Fact Sheet." [Online] April 2007. <<http://www.metrolinktrains.com/about/?id=6>>. City of Santa Clarita. "City of Santa Clarita Press Releases: Metrolink Ridership Soars in Santa Clarita." [Online] 21 November 2002. <<http://www.santaclarita.com/cityhall/press/o73101h.htm>>.

⁹⁹ Metrolink. "Fact Sheet Facts and Timeline: Our Story." [Online] 2010 20 August 2003. <<http://www.metrolinktrains.com/about/?id=6>http://www.metrolinktrains.com/about/facts_and_timeline.asp>.

The Landmark Village project would require off-site grading and materials transport of up to 7 million cubic yards (mcy) of fill to construct the tract map site and other related project components (see Section 2.0, Project Description). The grading and materials transport would come from the Adobe Canyon borrow site (approximately 5.8 mcy) and the Chiquito Canyon grading site (about 1.2 mcy). In addition, the applicant would conduct remedial grading (i.e., removal/recompaction) of ~~During grading,~~ approximately 4.2 mcy of existing fill within the Landmark Village tract map site in order to meet the flood-control requirements for constructing on the tract map site. million cubic yards of earthen materials would be graded on the Landmark Village site, up to 5.8 million cubic yards of which would be exported to the site from one borrow sites within Newhall Ranch. For the purposes of this impact analysis, it is assumed that the soil-fill from Adobe Canyon and Chiquito Canyon would be transported to Landmark Village via double-loaded, heavy-duty trucks, each with a capacity for 20 cubic yards. This does not preclude alternative modes of soil transport, such as conveyor systems, which are commonly used in the quarry and mining industries.

7. PROJECT IMPACTS

The analysis of potential local and regional air quality impacts associated with construction and operation of the proposed project, including the significance criteria applicable to assessing such impacts, is presented below.

a. Significant Thresholds Criteria

Based on the thresholds of significance identified in Appendix G of the *State CEQA Guidelines*, the proposed project would result in a significant impact to air quality if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for O₃ precursors);
- Expose sensitive receptors to substantial pollutant concentrations; and/or
- Create objectionable odors affecting a substantial number of people?

The County of Los Angeles typically refers to the thresholds recommended by the SCAQMD in its *CEQA Air Quality Handbook*. The following discusses the thresholds utilized in this analysis for both construction and operational emissions generated by the proposed project, as well as the threshold for cumulative impacts.

(1) Construction Emission Thresholds

The SCAQMD recommends that projects with construction-related emissions that exceed any of the following emissions thresholds should be considered significant:¹⁰⁰

- 24.75 tons per quarter or 550 pounds per day of CO;
- 2.5 tons per quarter or 75 pounds per day of VOC;
- 2.5 tons per quarter or 100 pounds per day of NO_x;
- 6.75 tons per quarter or 150 pounds per day of SO_x; ~~and~~
- 6.75 tons per quarter or 150 pounds per day of PM₁₀; and
- 55 pounds per day of PM_{2.5}.

(2) Operational Emissions

The SCAQMD has recommended two types of air pollution thresholds to assist lead agencies in determining whether or not the operational phase of a project's development would be significant. These are identified in the following discussion under Emission Significance Thresholds and Additional Indicators of Potential Air Quality Impacts. The SCAQMD recommends that a project's impacts be considered significant if any of these operational thresholds are exceeded.

(a) Emission Significance Thresholds

The SCAQMD has established these thresholds, in part, based on Section 182(e) of the federal CAA, which identifies 10 tons per year of VOC as the significance level for stationary sources of emissions in extreme nonattainment areas for O₃.¹⁰¹ As discussed earlier, VOC and NO_x undergo photochemical reactions in sunlight to form O₃ and the Basin is the only extreme nonattainment area for O₃ in the United States. This emission threshold has been converted to a pound per day threshold for the operational phase of a project. Thresholds for other emissions have been identified based on their levels in the Basin in comparison with O₃ levels. Because they are converted from a CAA threshold, the SCAQMD believes

¹⁰⁰ SCAQMD, *CEQA Air Quality Handbook*, (Diamond Bar, California: SCAQMD, November 1993), p. 6-4.

¹⁰¹ *Ibid.*, p. 6-1.

that these thresholds are based on scientific and factual data.¹⁰² Therefore, the district recommends that the following thresholds be used by lead agencies in making a determination of operation-related project significance:¹⁰³

- 550 pounds per day of CO;
- 55 pounds per day of VOC;
- 55 pounds per day of NO_x;
- 150 pounds per day of SO_x; ~~and~~
- 150 pounds per day of PM₁₀; and
- 55 pounds per day of PM_{2.5}.

(b) Additional Indicators of Potential Air Quality Impacts

The SCAQMD recommends that projects meeting any of the following criteria also be considered to have significant air quality impacts:¹⁰⁴

- Project could interfere with the attainment of the federal or state ambient air quality standards by either violating or contributing to an existing or projected air quality violation;
- Project could result in population increases within an area which would be in excess of that projected by SCAG in the AQMP, or increase the population in an area where SCAG has not projected that growth for the project's build-out year;
- Project could generate vehicle trips that cause a CO hotspot or project could be occupied by sensitive receptors that are exposed to a CO hotspot;
- Project will have the potential to create, or be subjected to, an objectionable odor that could impact sensitive receptors;
- Project will have hazardous materials on site and could result in an accidental release of toxic air emissions or acutely hazardous materials posing a threat to public health and safety;
- Project could emit a TAC regulated by SCAQMD rules or that is on a federal or state air toxic list;
- Project could be occupied by sensitive receptors within .25 mile of an existing facility that emits air toxics identified in SCAQMD Rule 1401; or

¹⁰² *Ibid.*

¹⁰³ *Ibid.*, p. 6-2.

¹⁰⁴ *Ibid.*, pp. 6-2–6-3.

- Project could emit carcinogenic or TACs that individually or cumulatively exceed the maximum individual cancer risk of 10 in 1 million.

The following discussion reviews the project's potential impacts relative to each of the recommended significance criteria identified above.

(3) Cumulative Significance Thresholds

The SCAQMD's *CEQA Air Quality Handbook* identifies three possible methods to determine the cumulative significance of land use projects. If the analysis shows that an individual project is consistent with the AQMP performance standards, the project's cumulative impact could be considered less than significant. If the analysis shows that the project does not comply with the standards, then cumulative impacts are considered to be significant unless there is other pertinent information to the contrary.

The performance standards are:

- Reduction of the Rate of Growth in VMT and Trips;
- 1 Percent Per Year Reduction in Project Emissions of CO, VOC, NO_x, SO_x, and PM₁₀; and
- 1.5 Average Vehicle Ridership (AVR), or Average Vehicle Occupancy, if a Transportation Project. The requirement to achieve a specific AVR has been ruled unlawful by the federal government and is no longer recommended.

b. Construction-Related Impacts

(1) Construction Emissions

As mentioned above, construction-related emissions can be designated as either on-site or off-site. On-site emissions generated during construction principally consist of exhaust emissions (NO_x, SO_x, CO, VOC, and PM₁₀, including PM_{2.5}) from heavy-duty diesel powered construction equipment operation, fugitive dust (PM₁₀, including PM_{2.5}) from disturbed soil, and evaporative VOC emissions from asphaltic paving, and architectural coatings (i.e., painting). Off-site emissions during the construction phase normally consist of exhaust emissions and entrained paved road dust (PM₁₀, including PM_{2.5}) during grading and soil removal at the two soil export sites, transporting the cut material to the Landmark Village site, from worker commute trips. Emissions during the construction phase are also a result of truck trips made for equipment and materials delivery, and to remove wastes and unused materials from the construction site.

Development of the proposed project would require site preparation (i.e., removal of the existing irrigation equipment and agricultural sheds, clearing, and grading); pavement and asphalt installation

(including infrastructure improvements); and construction of the proposed residential, commercial, institutional, and recreational uses. The few agricultural sheds that exist at the site would be dismantled largely by hand. Their dismantlement would occur concurrently with on-site grading and emissions from their demolition are factored into the site grading activities. During project buildout, emissions would be generated by on-site stationary sources, heavy-duty construction vehicles, on-road trucks, and construction worker vehicles. In addition, fugitive dust would be generated during grading and pavement installation.

Because of the construction time frame and the normal day-to-day variability in construction activities, it is difficult, if not impossible, to precisely quantify the daily emissions associated with each construction subphase. **Table 4.9-17, Estimated Unmitigated Construction Emissions (URBEMIS2007)**, nonetheless, conservatively identifies daily emissions associated with construction based on information provided by the project applicant and on other information provided in the *Software Users' Guide [for] URBEMIS2007~~2~~ for Windows with Enhanced Construction Module (November 2007~~May 2002~~)*.¹⁰⁵ (These assumptions have been entered into the spreadsheets that are available for review in Recirculated Draft EIR **Appendix 4.9**.) These results are also based on the assumption that all of the construction equipment in each subphase would operate continuously over an 8-hour period. In reality, this would not occur, as most equipment would operate for only a fraction of each workday. Another assumption is that all construction equipment would be properly maintained, grading activities would conform to Rule 403 to control fugitive dust emissions, and that low VOC emission asphalt and architectural coating would be used. As shown in **Table 4.9-17**, the project's construction-related emissions would exceed one or more of the SCAQMD's construction thresholds of significance during each all but one of the construction subphases.

It is expected that the project's construction-related activities will either emit the other criteria pollutants (i.e., sulfates, hydrogen sulfide, Pb, vinyl chloride, and visibility reducing particles) in nominal quantities (i.e., sulfates), not at all (i.e., hydrogen sulfide, Pb, and vinyl chloride), or will be accounted for by the pollutants actually estimated in this analysis (i.e., visibility reducing particles). Note that NO_x and VOC are O₃ precursors and NO₂, SO₂, and PM_{2.5} are subset of NO_x, SO_x, and PM₁₀, respectively.

¹⁰⁵ California Air Resources Board. "URBEMIS2007~~2~~ Program." [Online] 22 December 2003. <[http://www.arb.ca.gov/planning/urbemis/urbemis2007~~2~~/urbemis2007~~2~~.htm](http://www.arb.ca.gov/planning/urbemis/urbemis20072/urbemis20072.htm)>.

Table 4.9-17
Estimated Unmitigated Construction Emissions (URBEMIS2007)¹

Subphase/Emissions Source	Maximum Emissions (lbs/day)				
	CO	VOC	NO _x	SO _x	PM ₁₀
Weeks 1 thru 19					
Unmitigated Emissions Total	<u>475.33</u> 1,904.84	<u>117.27</u> 295.29	<u>1,068.47</u> 1,531.46	<u>0.13</u> 0.65	<u>1,923.62</u> ² 6,863.21
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	<u>NO</u> YES	YES	YES	NO	YES
Notes: No Demolition, Pavement and Asphalt, or Building Construction during this subphase. Assumes conformance with Fugitive Dust Rule 403.					
Weeks 20 thru 39					
Unmitigated Emissions Total	<u>764.59</u> 3,285.77	<u>191.69</u> 467.09	<u>1,700.58</u> 2,676.20	<u>0.17</u> 0.81	<u>2,431.89</u> ³ 6,903.47
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	YES	YES	YES	NO	YES
Notes: No Demolition or Building Construction during this subphase. Assumes conformance with Fugitive Dust Rule 403.					
Weeks 40 thru 46					
Unmitigated Emissions Total	<u>1,058.30</u> 5,007.45	<u>303.71</u> 844.93	<u>2,428.89</u> 4,329.78	<u>0.18</u> 0.79	<u>2,466.19</u> ⁴ 6,983.38
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	YES	YES	YES	NO	YES
Notes: No Demolition during this subphase. Assumes conformance with Fugitive Dust Rule 403.					
Weeks 47 thru 91					
Unmitigated Emissions Total	<u>642.89</u> 3,102.61	<u>188.97</u> 549.63	<u>1,376.08</u> 2,798.32	<u>0.14</u> 0.15	<u>65.22</u> ⁵ 131.16
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	YES	YES	YES	NO	NO
Notes: No Demolition or Grading during this subphase.					
Week 92					
Unmitigated Emissions Total	<u>622.94</u> 3,603.81	<u>196.86</u> 603.46	<u>1,435.16</u> 3,035.29	<u>0.05</u> 0.06	<u>67.75</u> ⁶ 122.52
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	YES	YES	YES	NO	NO
Notes: No Demolition or Grading during this subphase.					
Weeks 93 thru 144					
Unmitigated Emissions Total	<u>642.49</u> 3,306.30	<u>177.84</u> 555.86	<u>1,326.41</u> 2,790.95	<u>0.14</u> 0.05	<u>63.01</u> ⁷ 112.86
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	YES	YES	YES	NO	NO
Notes: No Demolition or Grading during this subphase.					
Weeks 145 thru 158					
Unmitigated Emissions Total	<u>534.31</u> 3,126.78	<u>160.25</u> 528.79	<u>1,139.61</u> 2,527.25	<u>0.07</u> 0.05	<u>54.67</u> ⁸ 97.52
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	<u>NO</u> YES	YES	YES	NO	NO

Subphase/Emissions Source	Maximum Emissions (lbs/day)				
	CO	VOC	NO _x	SO _x	PM ₁₀
Notes: No Demolition or Grading during this subphase.					
Weeks 159 thru 178					
Unmitigated Emissions Total	<u>271.68</u> 1,764.79	<u>91.64</u> 358.43	<u>551.13</u> 1,402.96	<u>0.05</u> 0.03	<u>26.18</u> ⁹ 53.80
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	<u>NO</u> YES	YES	YES	NO	NO
Notes: No Demolition, Grading, or Pavement and Asphalt during this subphase.					
Weeks 179 thru 196					
Unmitigated Emissions Total	<u>233.03</u> 1,549.32	<u>80.61</u> 332.26	<u>476.87</u> 1,245.55	<u>0.04</u> 0.03	<u>22.42</u> ¹⁰ 48.53
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	<u>NO</u> YES	YES	YES	NO	NO
Notes: No Demolition, Grading, or Pavement and Asphalt during this subphase.					
Weeks 197 thru 210					
Unmitigated Emissions Total	<u>151.89</u> 1,064.36	<u>53.65</u> 218.82	<u>323.81</u> 854.79	0.02	<u>14.98</u> ¹¹ 33.26
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	<u>NO</u> YES	<u>NO</u> YES	YES	NO	NO
Notes: No Demolition, Grading, or Pavement and Asphalt during this subphase.					
Weeks 211 thru 220					
Unmitigated Emissions Total	<u>101.08</u> 794.57	<u>35.75</u> 134.83	<u>209.78</u> 596.44	0.01	<u>9.28</u> ¹² 22.03
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	<u>NO</u> YES	<u>NO</u> YES	YES	NO	NO
Notes: No Demolition, Grading, or Pavement and Asphalt during this subphase.					
Weeks 221 thru 235					
Unmitigated Emissions Total	<u>59.47</u> 500.54	<u>22.02</u> 71.95	<u>128.35</u> 374.61	<u>0.00</u> 0.01	<u>5.43</u> ¹³ 13.72
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	NO	NO	YES	NO	NO
Beg. 2015 (196 Weeks) ¹					
Unmitigated Emissions Total	<u>143.93</u> 905.93	<u>50.59</u> 147.09	<u>220.62</u> 669.17	<u>0.08</u> 0.03	<u>9.35</u> ¹⁴ 24.03

Subphase/Emissions Source	Maximum Emissions (lbs/day)				
	CO	VOC	NO _x	SO _x	PM ₁₀
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	<u>NO</u> YES	<u>NO</u> YES	YES	NO	NO
Notes: No Demolition, Grading, or Pavement and Asphalt during this subphase.					

Source: Impact Sciences, Inc., Air quality calculations can be found in Recirculated Draft EIR [Appendix 4.9](#) and Final EIR [Appendix F4.9](#).

¹ As a worst-case scenario, assumes all associated grading and pavement/asphalt is completed during the first three subphases.

² Includes 434.73 pounds of PM_{2.5}, which exceed the 55 pound PM_{2.5} threshold.

³ Includes 562.10 pounds of PM_{2.5}, which exceed the 55 pound PM_{2.5} threshold.

⁴ Includes 593.52 pounds of PM_{2.5}, which exceed the 55 pound PM_{2.5} threshold.

⁵ Includes 59.63 pounds of PM_{2.5}, which exceed the 55 pound PM_{2.5} threshold.

⁶ Includes 62.21 pounds of PM_{2.5}, which exceed the 55 pound PM_{2.5} threshold.

⁷ Includes 57.61 pounds of PM_{2.5}, which exceed the 55 pound PM_{2.5} threshold.

⁸ Includes 50.11 pounds of PM_{2.5}, which does not exceed the 55 pound PM_{2.5} threshold.

⁹ Includes 23.97 pounds of PM_{2.5}, which does not exceed the 55 pound PM_{2.5} threshold.

¹⁰ Includes 20.53 pounds of PM_{2.5}, which does not exceed the 55 pound PM_{2.5} threshold.

¹¹ Includes 13.73 pounds of PM_{2.5}, which does not exceed the 55 pound PM_{2.5} threshold.

¹² Includes 8.52 pounds of PM_{2.5}, which does not exceed the 55 pound PM_{2.5} threshold.

¹³ Includes 4.99 pounds of PM_{2.5}, which does not exceed the 55 pound PM_{2.5} threshold.

¹⁴ Includes 8.40 pounds of PM_{2.5}, which does not exceed the 55 pound PM_{2.5} threshold.

(a) Localized Significance Thresholds (LST)

The SCAQMDP has recommended that this EIR analyze ambient PM₁₀, including PM_{2.5}, NO₂, and CO concentrations (fugitive dust and motor vehicle and equipment exhaust) due to construction of the proposed project on ambient air quality concentrations in the vicinity of the construction site. The ambient air quality impacts are compared to thresholds established by the SCAQMD. The significance threshold for PM₁₀ represents compliance with Rule 403 (Fugitive Dust). The significance threshold for PM_{2.5} is intended to constrain emissions so as not to cause or contribute to an exceedance of the ambient air quality standards. The thresholds for NO₂ and CO represent the allowable increase in concentrations above background levels in the vicinity of the project that would not cause or contribute to an exceedance of the relevant ambient air quality standards.

(1) Emission Estimation Methodology

Unmitigated construction emissions were estimated based on the information provided in the Software Users' Guide: URBEMIS2007~~2~~ for Windows ~~with Enhanced Construction Module~~, Version ~~9.2.48.7.0~~ (November 2007~~April 2005~~) [The assumptions are available for review in Recirculated Draft EIR [Appendix 4.9](#)]. URBEMIS2007~~2~~ is a land use and transportation based air quality model developed in cooperation with the ARB and designed to estimate air emissions from new development projects,

including construction emissions. The emissions are estimated based on the information provided by the project applicant.¹⁰⁶ The key emission estimation assumptions are as follow:

- Anticipated starting year: 201~~00~~7
- Anticipated development duration: 235 weeks
- Anticipated grading and asphalt paving schedule: week 1 to week ~~46~~75
- Anticipated construction schedule: week ~~40~~76 to week 235
- Total number of acres of land to be graded: 291 acres
- Maximum acres graded per day: 28 acres
- Dust control measures: As required by SCAQMD Rule 403

The Utility Corridor

- Anticipated starting year: 201~~00~~7
- Anticipated development duration: 52 weeks
- Anticipated grading schedule: week 1 to week 30
- Anticipated grading and water tank construction schedule: week 31 to week 48
- Anticipated grading and water tank welding and coating schedule: week 49 to week 52
- Total number of acres of land to be graded: 32 acres
- Maximum acres graded per day: 0.12 acre
- Dust control measures: As required by SCAQMD Rule 403

In order to comparatively assess comparative impacts, **Table 4.9-18, Peak Background Concentrations for SRA 13 for the Period of 200~~6~~3 to 200~~8~~5**, shows the peak background concentrations of NO₂ and CO in Source Receptor Area (SRA) 13 (Santa Clarita Valley) in which the proposed project is located. These are the values on which LST criteria for NO_{2x} and CO are based.

¹⁰⁶ It is important to note that the information provided by the applicant is considered a reasonable estimate for analysis purposes. However, the estimates are subject to change due to factors outside the applicant's control, such as the availability of necessary equipment, topography, weather, and economic/market conditions. In addition, the estimated information, such as length of time needed for construction activity, the hours per day of construction activity, and the number of acres to be graded per day, may vary and are at the discretion of the applicant.

Table 4.9-18
Peak Background Concentrations for SRA 13 for the Period of 2006~~3~~ to 2008~~5~~

Pollutant	Averaging Period	Unit	2006 3	2007 4	2008 5	Peak Concentration ¹
Nitrogen Dioxide (NO ₂)	1 hour	ppm	<u>0.060</u> <u>0.12</u>	<u>0.063</u> <u>0.09</u>	<u>0.060</u> <u>0.08</u>	<u>0.0610.12</u>
Carbon Monoxide (CO)	1 hour	ppm	<u>23</u>	<u>25</u>	2	<u>25</u>
Carbon Monoxide (CO)	8 hours	ppm	<u>1.31.7</u>	<u>1.23.7</u>	<u>1.11.3</u>	<u>1.33.7</u>

Source: *South Coast Air Quality Management District, "Historical Data By Year," [Online] 2010.*
<http://www.aqmd.gov/smog/historicaldata.htm>.

¹ The peak background concentration for NO₂ is based on the 3-year average of the 98th-percentile of the annual distribution of daily maximum 1-hour concentrations for 2006 through 2008, consistent with the NAAQS for NO₂. All other peak background concentrations are based on the maximum concentrations between 2006 and 2008.

SCAQMD "Historical Data by Year." [Online] [March 30, 2005]. <http://www.aqmd.gov/smog/historicaldata.htm>.
 U.S. Environmental Protection Agency, *Air Data: Access to Air Pollution Data* [Online] [March 2, 2006].
<http://www.epa.gov/air/data/index.html>.

Table 4.9-19, Localized Significance Criteria, shows the threshold criteria recommended by the SCAQMD for determining whether the emissions resulting from construction of a development project have the potential to generate significant adverse local impacts on ambient air quality. The SCAQMD's concentration-based PM₁₀ and PM_{2.5} threshold from its *Localized Significance Threshold Methodology (LST Methodology)*¹⁰⁷ is a 24-hour average concentration of 10.4 µg/m.³ ~~based on compliance with Rule 403.~~ The thresholds for NO₂ and CO were based on the maximum concentrations that occurred during the last three years (2006~~3~~ to 2008~~5~~) as shown in **Table 4.9-18**. These thresholds represent the allowable increase in NO₂ and CO ambient concentrations above current levels that could occur in SRA 13 without causing or contributing to exceedances of the CAAQS. For reference, the applicable CAAQS are also shown in **Table 4.9-19, Localized Significance Criteria**.

¹⁰⁷ SCAQMD, *Final Localized Significance Threshold Methodology*, ~~July~~ June 2008~~3~~.

**Table 4.9-19
Localized Significance Criteria**

Pollutant	Averaging Period	CAAQS/NAAQS		Peak Conc. in ppm	LST Criteria ¹	
		µg/m ³	ppm			
Respirable Particulate Matter (PM ₁₀)	24 hours	50	NA	NA	10.4 2	NA
Nitrogen Dioxide (NO ₂)	1 hour	188 470	0.1000 25	0.061 0.12	73 244	0.039 0.13
Carbon Monoxide (CO)	1 hour	23,000	20	25	20,711 17,165	185
Carbon Monoxide (CO)	8 hours	10,000	9.0	1.33 7	8,512 6, 065	7.75 3

Source: SCAQMD, Final Localized Significance Threshold Methodology, ~~July~~ June 2008~~3~~.

¹ LST Criteria is the difference between the more stringent of the CAAQS or NAAQS and the Peak Concentration.

² LST Criteria for Respirable Particulate Matter (PM₁₀) and Fine Particulate Matter (PM_{2.5}) is the same.

The maximum daily emissions that could occur on the project site from any construction phase were selected for the LST analysis. The maximum daily emissions for each pollutant may occur during a different subphase (e.g., grading, building construction). **Table 4.9-20, Estimated Construction Emissions Associated with the Proposed Project**, shows the estimated construction emissions associated with each individual pollutant proposed project that would occur on the Landmark Village project site.

**Table 4.9-20
Estimated Construction Emissions Associated with the Proposed Project**

Pollutant	Maximum Daily Emissions (pounds per day)	
	Fugitive Dust	Mobile Sources
PM ₁₀ ¹	2,355.231 253.84 ³	106.2841 20 ⁴
NO _x ²	—	2,333.342 524.30
CO ²	—	968.813 184.13

Source: Construction emissions were estimated based on the information provided in the User's Guide [for] URBEMIS2007~~2~~ for Windows with Enhanced Construction Module (~~November 2007~~ May 2002). Emissions reflect the worst-case scenario (i.e., highest daily emissions associated with the project). The worst-case daily emissions may occur in different project subphases.

¹ Maximum daily PM₁₀ emissions, including PM_{2.5}, are expected to occur during week ~~40~~45 to week ~~46~~48.

² Maximum daily CO and NO_x emissions are expected to occur during week ~~40~~45 to week ~~46~~48.

³ Includes 491.87 pounds of PM_{2.5} emissions.

⁴ Includes 97.77 pounds of PM_{2.5} emissions.

(2) *Project-Specific Impacts*

~~Table 4.9-21, Modeling Results – Maximum Impacts at Residential Receptors; Table 4.9-22, Modeling Results – Maximum Impacts at Workplace Receptors; and Table 4.9-23, Modeling Results – Maximum Impacts at Sensitive Receptors,~~ below, shows the maximum PM₁₀, including PM_{2.5}, NO₂, and CO concentrations associated with the proposed project at residential, workplace, and sensitive receptors, respectively. The nearest residential community to the project site is the community of Val Verde, located approximately 1.9 kilometers (1.2 miles) to the north, across SR-126. Other residences are scattered throughout the area, primarily to the north of the site across SR-126. A recreational vehicle park (Travel Village) is located to the east of the project site; however, occupants are limited to a 30-day stay. The nearest potential off-site workplace receptors are located to the northeast in the Valencia Commerce Center, approximately 700 meters (2,297 feet) to the northeast. The nearest sensitive receptors are located approximately 1.7 kilometers (1.1 miles) to the northeast in the Live Oak Elementary School.

Table 4.9-21
Modeling Results – Maximum Impacts at Sensitive Residential Receptors

Pollutant	Averaging	Modeling Results		LST Criteria ¹		Exceeds Threshold?
	Period	µg/m ³	ppm	µg/m ³	ppm	
Respirable Particulate Matter (PM ₁₀)	24 hours	<u>34.09</u> 56.08	NA	10.4	NA	YES
Nitrogen Dioxide (NO ₂)	1 hour	<u>324.1140</u> 4.83	<u>0.170.22</u>	<u>73244</u>	<u>0.0390.13</u>	YES
Carbon Monoxide (CO)	1 hour	<u>561.2968</u> 0.87	<u>0.490.59</u>	<u>20,71147</u> 165	185	NO
Carbon Monoxide (CO)	8 hours	<u>70.1697.3</u> 1	<u>0.060.09</u>	<u>8,5126,06</u> 5	<u>7.75.3</u>	NO

Source: Impact Sciences, Inc.

¹ SCAQMD, Final Localized Significance Threshold Methodology, ~~July~~ June 2008~~3~~.

² Includes 12.83 µg/m³ of PM_{2.5} emissions, which exceed the 10.4 threshold.

The maximum impacts were observed at the community of Val Verde located approximately 1.9 kilometers to the north, across SR 126.

Table 4.9-22
Modeling Results—Maximum Impacts at Workplace Receptors

Pollutant	Averaging	Modeling Results		LST Criteria [‡]		Exceeds
	Period	µg/m ³	ppm	µg/m ³	ppm	Threshold?
Respirable Particulate Matter (PM ₁₀)	24 hours	60.90	NA	10.4	NA	YES
Nitrogen Dioxide (NO ₂)	1 hour	483.28	0.26	244	0.13	YES
Carbon Monoxide (CO)	1 hour	1,787.23	1.56	17,165	15	NO
Carbon Monoxide (CO)	8 hours	243.5	0.21	6,065	5.3	NO

Source: Impact Sciences, Inc.

[‡]—SCAQMD, Final Localized Significance Threshold Methodology, June 2003.

The maximum impacts were observed at the Valencia Commerce Center located approximately 700 meters to the northeast.

Table 4.9-23
Modeling Results—Maximum Impacts at Sensitive Receptors

Pollutant	Averaging	Modeling Results		LST Criteria [‡]		Exceeds
	Period	µg/m ³	ppm	µg/m ³	ppm	Threshold?
Respirable Particulate Matter (PM ₁₀)	24 hours	14.82	NA	10.4	NA	YES
Nitrogen Dioxide (NO ₂)	1 hour	223.90	0.12	244	0.13	NO
Carbon Monoxide (CO)	1 hour	424.65	0.37	17,165	15	NO
Carbon Monoxide (CO)	8 hours	53.08	0.05	6,065	5.3	NO

Source: Impact Sciences, Inc.

[‡]—SCAQMD, Final Localized Significance Threshold Methodology, June 2003.

The maximum impacts were observed at the Live Oak Elementary School located approximately 1.7 kilometers to the northeast.

The LST analysis shows that maximum 24-hour concentrations of PM₁₀, including PM_{2.5}, would exceed the threshold of significance established by SCAQMD at the nearest ~~residential, workplace, and~~ sensitive receptors to the project site. Also, 1-hour NO₂ concentrations would exceed the threshold of significance established by SCAQMD at the nearest ~~sensitive residential and workplace~~ receptors to the project site. A detailed discussion of the calculations and methodologies used for the LST analysis is provided in Recirculated Draft EIR **Appendix 4.9**; see also Final EIR **Appendix F4.9**.

The impacts suggest that PM₁₀ emissions, including PM_{2.5}, could exceed the limitations in SCAQMD Rule 403. While the NO₂ concentrations exceed the LST thresholds, the NCAAQS would be exceeded only if: (1) the actual background concentrations were as high as those on which the LST thresholds are

based during the worst-case construction day; (2) the amount of construction activity (e.g., number and types of equipment, hours of operation) assumed in this analysis actually occurred; and (3) the meteorological conditions in the data set used in the dispersion modeling analysis occurred in the vicinity of the project site on the worst-case construction day.

(2) Construction Emissions Conclusions

Because project construction emissions would exceed one or more of the SCAQMD's CO, VOC, NO_x, and PM₁₀, including PM_{2.5}, thresholds of significance during ~~all but one subphase of~~ the project's construction, the emission levels are considered potentially significant and feasible mitigation is required. The effectiveness of the proposed mitigation in reducing these potentially significant adverse air quality impacts is discussed below.

c. Operational Impacts

(1) Daily Emissions

Operational emissions would be generated by point, area, and mobile sources as a result of normal day-to-day activities on the project site after occupation.

(a) Point Source Emissions

Point source emissions could be generated, depending upon the types of uses that locate in the Mixed-Use/Commercial areas of the project site. For this analysis, it is conservatively assumed that the types of point sources that could potentially locate in this area could include fast-food restaurants with under-fired charbroilers, dry cleaners, and fuel dispensers at gasoline stations.

If a dry cleaning storefront is located in the commercial area on the project site, all actual dry cleaning operations must occur at already SCAQMD-permitted off-site locations, consistent with Mitigation Measure LV 4.9-5. Therefore, no point source emission permit under the authority of the SCAQMD would be required.

PM₁₀, including PM_{2.5}, and VOC emissions from fast-food restaurants with charbroilers are regulated under SCAQMD Rule 1138,¹⁰⁸ which requires installation of a catalytic oxidizer that can reduce PM₁₀ emissions by approximately 89 percent and VOC emissions by 86 percent. It is assumed that PM_{2.5} emissions would also be reduced by approximately 89 percent.

VOC emissions from gasoline station operations are generated from gasoline dispensing, storage tank "breathing," and gasoline spillage. VOC emissions from gasoline dispensing are regulated by SCAQMD

¹⁰⁸ SCAQMD, Rule 1138: Control of Emissions From Restaurant Operations, (Diamond Bar, California: SCAQMD, Adopted 14 November 1997). See also "Rule 1138." [Online] 22 December 2003. <<http://www.aqmd.gov/rules/html/r1138.html>>.

Rule 461, which requires vapor recovery systems that can reduce vapor loss during dispensing by as much as 95 percent.¹⁰⁹

Although the specific uses that would locate at the Mixed-Use/Commercial sites are yet unknown, it is assumed for the purposes of this impact analysis, based on common uses in similarly sized commercial centers, that at least one fast-food restaurant with an under-fired charbroiler and at least one gas station could operate at the site. Both of these uses, should they occur, would require SCAQMD permits to operate and would be required to employ best available control technologies (BACT) to control their stationary source emissions before they could receive their permits. Based on information obtained from the SCAQMD,¹¹⁰ it is assumed that such a restaurant would charbroil 233 pounds of 25 percent fat content hamburger meat¹¹¹ daily and would operate in conformance with Rule 1138. Based on those assumptions, the restaurant would generate 0.84 pounds of PM₁₀, including PM_{2.5},¹¹² and 0.13 pounds of VOC per day.¹¹³ Based on information obtained from the SCAQMD,¹¹⁴ it is assumed that the gas station would have a throughput of 10,000 gallons per day and would operate in conformance with Rule 461. Based on those assumptions, the gas station would generate 3.01 pounds of VOC per day.¹¹⁵

The above analysis is expected to be consistent with the analysis that would be performed during the SCAQMD permit process; permits would not be issued for these uses by the SCAQMD unless they comply with SCAQMD rules and regulations, including the use of emission control equipment at the site. Accordingly, based on the above stationary source emissions from these uses and the SCAQMD

¹⁰⁹ SCAQMD, Rule 461: Gasoline Transfer and Dispensing (Amended March 7, 2008~~January 9, 2004~~). [Online] 1627 June 2010~~October 2004~~. <<http://www.aqmd.gov/rules/reg/reg04/r461.pdf>>.

¹¹⁰ SCAQMD, Staff Report for Proposed Rule 1138 – Control of Emissions From Restaurant Operations, (Diamond Bar, California: SCAQMD, October 1997).

¹¹¹ High fat content hamburger meat generates the greatest amount of PM₁₀ and VOC emissions of most charbroiled meats. Staff Report for Proposed Rule 1138 – Control of Emissions From Restaurant Operations, pp. 11–12.

¹¹² This emission assumes an uncontrolled emission rate of 32.65 pounds of PM₁₀ per 1,000 pounds of 25 percent fat hamburger meat and an 89 percent reduction rate. Staff Report for Proposed Rule 1138 – Control of Emissions From Restaurant Operations, p. 11.

¹¹³ This emission assumes an uncontrolled emission rate of 3.94 pounds of VOC per 1,000 pounds of 25 percent fat hamburger meat and an 86 percent reduction rate. Staff Report for Proposed Rule 1138 – Control of Emissions From Restaurant Operations, p. 11.

¹¹⁴ SCAQMD, Final Staff Report for Proposed Amended Rule 461 – Gasoline Transfer And Dispensing, (Diamond Bar, California: SCAQMD, February 2008~~August 1995~~). Telephone voice mail Randy Matsuyama, Air Quality Engineer II, SCAQMD, to Darren W. Stroud, Nossaman, Guthner, Knox & Elliott, LLP, 20 October 2003.

¹¹⁵ This calculation assumes an emission rate of 0.417 pounds of VOC/1,000 gallons during gasoline dispensing, 0.027 pounds of VOC/1,000 gallons from storage tank breathing, and 0.232 pounds of VOC/1,000 gallons from gasoline spillage. The emission rate of 0.417 was provided by SCAQMD staff (telephone voice mail Randy Matsuyama, Air Quality Engineer II, SCAQMD, to Darren W. Stroud, Nossaman, Guthner, Knox & Elliott, LLP, October 20, 2003). The emission rate of 0.027 lb/1,000 gallons is based on the emission factor of 0.1 lb/1,000 gallons from p. A-2 of the Staff Report for Proposed Rule 461 – Gasoline Transfer and Dispensing for the Pressure/Vacuum Vent (P/V) Valve on Vent Pipe (Breathing Loss) calculation and the control efficiency of 73 percent. The emission rate of 0.232 lb/1,000 gallons is based on the emission factor of 0.29 lb/1,000 gallons from p. A-3 of the Staff Report for Proposed Rule 461 – Gasoline Transfer and Dispensing for the Required Check Valve in the Nozzle calculation, and a control efficiency of 20 percent.

requirement that the operators employ BACT and other emission controls prior to issuance of a permit to operate from the SCAQMD,¹¹⁶ point source emissions from the fast-food restaurant and gasoline station, as shown in **Table 4.9-24, Estimated Operational Emissions (URBEMIS2007) Without Mitigation**, would be minimal and less than significant.

(b) Area and Mobile Source Emissions

Area sources emissions would be generated during the consumption of natural gas for space and water heating devices, by natural gas~~wood-burning~~ fireplaces, and during the operation of gasoline-powered landscape maintenance equipment and use of consumer products (e.g., hair spray, deodorants, lighter fluid, air fresheners, automotive products, and household cleaners). Mobile source emissions would be generated by the motor vehicles traveling to and from the project site.

Inputting project land use characteristics, trip generation information from the Landmark Village Traffic Analysis prepared by Austin-Foust Associates, Inc. (~~October 2003~~September 2004), and the above project assumptions, URBEMIS2007~~2~~ was used to calculate area and mobile source emissions from the proposed project for both summertime and wintertime emissions. The primary difference between the summertime and the wintertime emissions is that natural gas~~wood-burning~~ fireplaces would only generate emissions during wintertime. The project's area and mobile source emissions, as estimated using URBEMIS2007~~2~~, are shown in **Table 4.9-24**. The table does not reflect mitigation required of the Landmark Village project under the Newhall Ranch Specific Plan approval. The mitigating effects of these measures on Landmark Village air emissions are calculated later on in this impact analysis under **Subsection 8, Mitigation Measures**.

As shown in **Table 4.9-24**, the project at buildout and in full operation would generate total summertime and wintertime emissions that would exceed the thresholds for CO, VOC, NO_x, and PM₁₀, including PM_{2.5}. As the amount of emissions under each scenario would exceed the recommended significance thresholds for operational emissions, project air quality impacts would be significant for both scenarios.

(2) Additional Indicators of Potential Air Quality Impacts

As previously discussed, the SCAQMD lists additional criteria indicating when a project may create potential air quality impacts.¹¹⁷ These criteria are listed below along with an analysis of whether or not

¹¹⁶ SCAQMD, Rule 1303 – Requirements, (Diamond Bar, California: SCAQMD, Amended 6 December 2002); <http://www.aqmd.gov/rules/reg/reg13/r1303.pdf>; Rule 1138. Control Of Emissions From Restaurant Operations, (Diamond Bar, California: SCAQMD, Adopted 14 November 1997). <http://www.aqmd.gov/rules/reg/reg11/r11385.pdf>; Rule 461. Gasoline Transfer And Dispensing, (Diamond Bar, California: SCAQMD, Amended ~~7~~15 ~~March~~June 2008~~4~~). <http://www.aqmd.gov/rules/reg/reg04/r461.pdf>.

¹¹⁷ SCAQMD, *CEQA Air Quality Handbook*, (Diamond Bar, California: SCAQMD, November 1993), pp. 6-2–6-3.

the project meets any of them. If a project meets any one of the criteria, project air quality impacts would be significant relative to that criterion.

- Project could interfere with the attainment of the federal or state ambient air quality standards by either violating or contributing to an existing or projected air quality violation.

Table 4.9-24
Estimated Unmitigated Operational Emissions ~~Without Mitigation~~ (URBEMIS2007)

Emissions Source	Emissions in Pounds per Day				
	CO	VOC	NO _x	SO _x	PM ₁₀
Summertime Emissions					
Point Sources	<u>0.00</u> –	3.14	<u>0.00</u> –	<u>0.00</u> –	0.84
Mobile Sources	<u>1,989.02</u> <u>4,086.19</u>	<u>185.52</u> <u>337.40</u>	<u>216.70</u> <u>385.45</u>	<u>2,632.43</u>	<u>426.36</u> <u>371.12</u>
Area Sources					
Natural Gas	<u>16.92</u> <u>42.18</u>	<u>2,402.21</u>	<u>31.52</u> <u>29.13</u>	<u>0.00</u> –	<u>0.06</u> <u>0.05</u>
Wood Stoves	0.00	0.00	0.00	0.00	0.00
Fire Places	0.00	0.00	0.00	0.00	0.00
Landscape Maintenance	<u>38,745.78</u>	<u>5,750.71</u>	<u>0,460.08</u>	<u>0,000.09</u>	<u>0,110.01</u>
Consumer Products	<u>0.00</u> –	<u>75,567</u> <u>5.46</u>	<u>0.00</u> –	<u>0.00</u> –	<u>0.00</u> –
<u>Architectural Coating</u>	<u>0.00</u>	<u>9.99</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
Area Source Subtotal	<u>55.66</u> <u>17.96</u>	<u>93.70</u> <u>78.38</u>	<u>31.98</u> <u>29.21</u>	<u>0.00</u> <u>0.09</u>	<u>0.17</u> <u>0.06</u>
Summertime Emission Totals:	<u>2,044.68</u> <u>4,104.14</u>	<u>282.36</u> <u>418.92</u>	<u>248.68</u> <u>414.66</u>	<u>2,632.52</u>	<u>427.37</u> ¹ <u>372.02</u>
Recommended Threshold:	550.0	55.0	55.0	150.0	150.0
Exceeds Threshold?	YES	YES	YES	NO	YES
Wintertime Emissions					
Point Sources	<u>0.00</u> –	3.14	<u>0.00</u> –	<u>0.00</u> –	0.84
Mobile Sources	<u>1,925.72</u> <u>3,939.50</u>	<u>202.00</u> <u>324.54</u>	<u>260.33</u> <u>557.65</u>	<u>2,161.97</u>	<u>426.36</u> <u>371.12</u>

Emissions Source	Emissions in Pounds per Day				
	CO	VOC	NO _x	SO _x	PM ₁₀
Area Sources					
Natural Gas	<u>16.92</u> <u>42.18</u>	<u>2,402.21</u>	<u>31.52</u> <u>29.13</u>	<u>0.00</u> –	<u>0.06</u> <u>0.05</u>
Wood Stoves	0.00	0.00	0.00	0.00	0.00
Fire Places	<u>4.09</u> <u>1,784.09</u>	<u>0.56</u> <u>1,617.41</u>	<u>9.62</u> <u>18.36</u>	<u>0.06</u> <u>2.83</u>	<u>0.78</u> <u>244.38</u>
Landscape Maintenance	<u>0.00</u> <u>5.78</u>	<u>0.00</u> <u>0.71</u>	<u>0.00</u> <u>0.08</u>	<u>0.00</u> <u>0.09</u>	<u>0.00</u> <u>0.01</u>
Consumer Products	<u>0.00</u> –	<u>75.56</u> <u>75.46</u>	<u>0.00</u> –	<u>0.00</u> –	<u>0.00</u> –
<u>Architectural Coating</u>	<u>0.00</u>	<u>9.99</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
Area Source Subtotal	<u>21.01</u> <u>1,802.05</u>	<u>88.51</u> <u>1,695.79</u>	<u>41.14</u> <u>47.57</u>	<u>0.06</u> <u>2.92</u>	<u>0.84</u> <u>244.44</u>
Wintertime Emission Totals:	<u>1,946.73</u> <u>5,741.55</u>	<u>293.65</u> <u>2,023.47</u>	<u>301.47</u> <u>605.22</u>	<u>2.22</u> <u>4.89</u>	<u>428.04</u> ² <u>616.4</u>
Recommended Threshold:	550.0	55.0	55.0	150.0	150.0
Exceeds Threshold?	YES	YES	YES	NO	YES
<p>Source: Impact Sciences, Inc. Emissions calculations are provided in Recirculated Draft EIR Appendix 4.9. Totals in table may not appear to add exactly due to rounding in the computer model calculations.</p> <p>¹ Includes 84.32 pounds per day of PM_{2.5} emissions, which exceed the 55 pound PM_{2.5} threshold. The majority of the PM 2.5 emissions are from mobile sources (83.31 pounds per day). Individual component source emission amounts are presented in Final EIR Appendix F4.9.</p> <p>² Includes 84.98 pounds per day of PM_{2.5} emissions, which exceed the 55 pound PM_{2.5} threshold. The majority of the PM 2.5 emissions are from mobile sources (83.31 pounds per day). Individual component source emission amounts are presented in Final EIR Appendix F4.9.</p>					

SCAQMD's *CEQA Air Quality Handbook* suggests that an air quality modeling analysis (i.e., dispersion modeling) may be performed that identifies the project's potential impact on ambient air quality. A project would not create potential significant adverse air quality impacts if the dispersion modeling demonstrates that the project's incremental emissions would not increase the frequency or the severity of existing air quality violations, or contribute to a new violation.¹¹⁸ It has already been demonstrated that the project's CO emissions would not exceed the criteria (see [Tables 4.9-21, 4.9-22, and 4.9-23](#), above) and this finding is consistent with that of the Newhall Ranch Specific Plan Program EIR. With respect to the other pollutants (i.e., NO_x, SO_x, VOC, and PM₁₀, including PM_{2.5}), SCAQMD staff have stated that air quality dispersion models do not currently exist for general development projects that can determine if the project's NO_x, SO_x, VOC, and PM₁₀, including PM_{2.5}, emissions would increase the frequency or the

¹¹⁸ SCAQMD, *CEQA Air Quality Handbook*, (Diamond Bar, California: SCAQMD, November 1993), p. 12-3.

severity of existing air quality violations, or contribute to a new violation.¹¹⁹ Therefore, no such air quality dispersion analysis can be undertaken for this project.

Instead, SCAQMD staff state that a project's consistency with the population number and location assumptions identified by SCAG and used in the preparation of the 2007~~3~~ AQMP should be assessed as required by the next criterion:

- Project could result in population increases within an area that would be in excess of that projected by SCAG in the AQMP, or increase the population in an area where SCAG has not projected that growth for the project's build-out year.

The 2007~~3~~ AQMP is designed to accommodate planned growth, to reduce the high levels of pollutants within the areas under the jurisdiction of SCAQMD, to achieve the federal 8-hour ozone standard by 2024 (under the bump-up to "extreme" nonattainment)~~return clean air to the region by 2010~~, and to minimize the impact on the economy. Projects that are considered to be consistent with the AQMP do not interfere with attainment and do not contribute to the exceedance of an existing air quality violation because this growth is included in the projections utilized in the formulation of the AQMP. Therefore, projects, uses, and activities that are consistent with the applicable assumptions used in the development of the AQMP would not jeopardize the long-term attainment of the air quality levels identified in the AQMP, even if they exceed the SCAQMD's recommended thresholds.

Future air emissions within the Basin are based on demographic projections developed by SCAG for its 2004~~1~~ RTP.¹²⁰ Projects that are consistent with the projections of population forecasts identified in the 2004~~1~~ RTP are considered consistent with the AQMP growth projections. Because the population, housing, and employment that would be generated by Newhall Ranch have been incorporated into the 2004~~1~~ RTP, the Landmark Village project is consistent with the 2007~~3~~ AQMP and, therefore, it would not jeopardize attainment of state and federal ambient air quality standards in the Santa Clarita Valley area or the Basin.

Another means of assessing 2007~~3~~ AQMP consistency for this criterion is to determine how a project accommodates the expected increase in population and employment. Generally, if a project is planned in a way that results in the reduction~~minimization~~ of VMT both within the project and in the community in

¹¹⁹ Interview with Steve Smith, SCAQMD, Diamond Bar, California, February 23, 1996.

¹²⁰ SCAQMD. 2007~~3~~ AQMP. [Online] 27~~22~~ September~~December~~ 2007~~3~~. <<http://www.aqmd.gov/aqmp/07aqmp/index.html>~~AQMD03AQMP.htm~~>, p. 3-19.

which it is located, and consequently the ~~reduction~~~~minimization~~ of air pollutant emissions, that project is deemed to be consistent with the 2007~~3~~ AQMP.¹²¹

As discussed earlier, the Landmark Village project and Newhall Ranch include a mobility system with alternatives to automobile use, including a system of pedestrian and bicycle trails, and infrastructure to accommodate a bus transit system, a railway right-of-way, and a park and ride lot. As such, the project would ~~reduceminimize~~ VMT both within the project and within the community of Newhall Ranch as it builds out. Therefore, air emissions would be ~~reduced~~~~minimized~~.

- Project could generate vehicle trips that cause a CO hotspot or project could be occupied by sensitive receptors that are exposed to a CO hotspot.

According to the traffic impact analysis for the project (see **Section 4.7** and **Appendix 4.7** in the Recirculated Draft EIR), the following intersections would operate at LOS E or F (PM peak hour) at some point during interim project buildout (Phase 2) or at project buildout prior to mitigation: (1) Wolcott Way/SR-126; (2) Commerce Center Drive/SR-126; (3) Chiquita Canyon-Long Canyon Roads/SR-126; (4) I-5 SB Ramps/SR-126; and (5) I-5 NB Ramps/SR-126. As previously mentioned, traffic-congested roadways and intersections that operate at LOS E or F have the potential to generate localized high levels of CO within approximately 1,000 feet of a roadway.¹²²

Therefore, the project was evaluated to determine if traffic congestion at these intersections would cause a CO hotspot. The evaluation utilized a simplified CALINE4 screening model developed by the Bay Area Air Quality Management District (BAAQMD). The simplified model is intended as a screening analysis that identifies a potential CO hotspot. If a hotspot is identified, the complete CALINE4 model is then utilized to determine precisely the CO concentrations predicted at the intersections in question. This methodology assumes worst-case conditions (*i.e.*, wind direction is parallel to the primary roadway and 90 degrees to the secondary road, wind speed of less than 1 meter per second and extreme atmospheric stability) and provides a screening of maximum, worst-case, CO concentrations. This method is acceptable to the SCAQMD as long as it is used consistently with the *BAAQMD Guidelines*.¹²³ This model is utilized to predict future CO concentrations 0 and 25 feet from the intersections in the study area based on projected traffic volumes from the intersections contained in the traffic study for the project.¹²⁴ Intersections operating at a LOS of E or F are considered ~~have~~ to have the potential to create a CO

¹²¹ SCAQMD, *CEQA Air Quality Handbook*, (Diamond Bar, California: South Coast Air Quality Management District, November 1993), p. 12-5.

¹²² Institute of Transportation Studies, University of California, Davis, *Transportation Project-Level Carbon Monoxide Protocol*, (1997), p. 4-7.

¹²³ Communication with Steve Smith, Program Supervisor, South Coast Air Quality Management District, and Impact Sciences, Inc., May 12, 2004.

¹²⁴ ~~Austin-Foust Associates, Inc., *River Village Traffic Impact Analysis*, September 2004. Crain and Associates, *Traffic Impact Report for the Proposed Figueroa & Adams Apartments at 2455 S. Figueroa Street, City of Los Angeles*, (2008).~~

hotspot;¹²⁵ therefore, for the purposes of this analysis, only intersections estimated to operate at LOS E or F under future cumulative plus project traffic conditions were analyzed.

Maximum future cumulative plus project CO concentrations were calculated for peak hour morning and evening traffic volumes using the highest traffic volumes associated with project development. Background CO concentrations were included in the analysis. The results of these CO concentration calculations are presented in **Table 4.9-25, Carbon Monoxide Hotspots Analysis**, for representative receptors located 0 and 25 feet from the intersection.

**Table 4.9-25
Carbon Monoxide Hotspots Analysis**

Intersection	0 Feet		25 Feet	
	1-Hour ¹ (ppm)	8-Hour ² (ppm)	1-Hour ¹ (ppm)	8-Hour ² (ppm)
Interim Project Buildout (Phase 2)				
Wolcott & SR-126	8.3	6.0	7.0	5.1
Commerce Center & SR-126	7.7	5.6	6.6	4.8
Project Buildout				
I-5 SB Ramps & SR-126	8.9	6.4	7.3	5.3
I-5 NB Ramps & SR-126	8.3	6.0	7.0	5.1
Wolcott & SR-126	8.1	5.9	6.9	5.0
Commerce Center & SR-126	7.3	5.3	6.3	4.6
Chiquito/Long Canyon & SR-126	7.6	5.6	6.6	4.8

**Table 4.9-26
State and Federal Standards**

Standard/Intersection	0 Feet	25 Feet
Exceeds state 1-hour standard of 20 ppm?	NO	NO
Exceeds federal 1-hour standard of 35 ppm?	NO	NO
Exceeds state 8-hour standard of 9 ppm?	NO	NO
Exceeds federal 8-hour standard of 9 ppm?	NO	NO

Source: Impact Sciences, Inc., (2008). Emissions calculations are provided in Recirculated Draft EIR **Appendix 4.9**.

As shown in **Tables 4.9-25** and **4.9-26**, above, the CALINE4 screening procedure predicts that, under worst-case conditions, future CO concentrations at each intersection would not exceed the state or federal 1-hour and 8-hour standards with the development of the proposed project. No significant CO hotspot

¹²⁵ Institute of Transportation Studies, University of California, Davis, *Transportation Project-Level Carbon Monoxide Protocol*, (1997).

impacts would occur to sensitive receptors in the vicinity of these intersections. As a result, no significant project-related impacts would occur relative to future carbon monoxide concentrations.

- Project will have the potential to create, or be subjected to, an objectionable odor that could impact sensitive receptors.

The proposed residential and institutional uses on the site would not generate objectionable odors. Within the Commercial Uses, airborne odors associated would result primarily from cooking activities within any food services and eating establishments that may occur in these areas. Food-related odors would be typical of food service businesses and are not considered objectionable by most individuals. Food wastes can, however, putrefy if left on site in dumpsters for long periods of time without frequent disposal and can generate objectionable odors. In each case, such odors would be controlled in accordance with County Department of Health Services, SCAQMD permit requirements for proper air filtration and food storage and disposal, and SCAQMD Rule 402, which prohibits persons from discharging quantities of air contaminants which cause nuisance to any considerable number of persons.¹²⁶ Consequently, no significant impacts from such odors are anticipated.

The Newhall Ranch Specific Plan proposes a WRP within Newhall Ranch and to the west of the Landmark Village site. The plant, which was subject to its own separate environmental review, is a potential source of odors that could affect sensitive receptors within Landmark Village. The presence of strong easterly winds could also possibly cause objectionable odors to reach sensitive residential receptors to the east. The primary source of odor at WRPs is hydrogen sulfide produced by the activity of anaerobic organisms in anaerobic treatment processes at the plant site. Another common odor is that of non-ionized ammonia, which is prevalent and readily volatilized whenever the wastewater pH is elevated (becomes less acidic and more alkaline).¹²⁷ In addition, other organic compounds can contribute to odor production. These odors can be adequately controlled through physical design of the facility and proper operations management. The SCAQMD also controls the potential for odors through Regulation IX, Subpart O – Standards of Performance for Sewage Treatment Plants, which requires BACT for new WRP sources.¹²⁸ This regulation also requires that the primary treatment processes be covered and sealed, and that the exhaust gases from the primary treatment processes are vented to carbon absorbers (scrubbers). According to the County Sanitation Districts of Los Angeles County (CSDLAC),

¹²⁶ SCAQMD, Rule 402 – Nuisance (Adopted May 7, 1976). [Online] 27 October 2005. <<http://www.aqmd.gov/rules/reg/reg04/r402.pdf>>.

¹²⁷ Jones & Stokes, Associates Inc., Draft Program Environmental Impact Report for the Joint Outfall System 2010 Master Facilities Plan (Whittier, California: County Sanitation Districts of Los Angeles County: November 1994), p. 8-10.

¹²⁸ SCAQMD, Regulation IX - Standards of Performance for New Stationary Sources (Amended ~~March 5, 2010~~ ~~May 7, 2004~~). [Online] ~~1627 June~~ ~~October~~ ~~2010~~ ~~05~~. <<http://www.aqmd.gov/rules/reg/reg09/reg09.pdf>>.

each of these physical and managerial strategies has proven to be effective in controlling odors when properly applied.¹²⁹

One additional potential source of odors is the Chiquita Canyon Landfill located to the north and along the Newhall Ranch boundary. There are two potential sources of odors associated with landfill operations: (1) aerobic decomposition of organic refuse materials prior to being covered with soil, and (2) gases produced by anaerobic bacterial digestion of buried refuse. Each of these sources is controlled by landfill operations and equipment. For example, odors emanating from aerobic decomposition of refuse are controlled by compaction and covering of waste on a daily basis, while odoriferous gases produced by anaerobic decomposition of material within covered landfill cells are collected and disposed of in a landfill gas collection and flaring system.¹³⁰ Given the operational techniques employed as part of a sanitary landfill operation and the use of the gas collection and flaring system, no significant impacts from such odors are expected.

No other adjacent land uses are such that they would generate objectionable odors that would be detected on the project site. Consequently, no significant impacts from such odors are anticipated under this criterion.

- Project will have hazardous materials on site and could result in an accidental release of toxic air emissions or acutely hazardous materials posing a threat to public health and safety;
- Project could emit a toxic air contaminant regulated by SCAQMD rules or that is on a federal or state air toxic list;
- Project could be occupied by sensitive receptors within 0.25 mile of an existing facility that emits air toxics identified in SCAQMD Rule 1401; or
- Project could emit carcinogenic or toxic air contaminants that individually or cumulatively exceed the maximum individual cancer risk of 10 in 1 million.

TAC emissions are not expected to occur in conjunction with operation of the proposed development and, as a result, no significant impacts would occur under these criteria. Charbroilers are not typically considered sources of TACs, and, therefore, any charbroiler operated in association with the proposed Commercial Uses would not be expected to emit TACs that would exceed the SCAQMD's recommended

¹²⁹ Jones & Stokes, Associates Inc., Draft Program Environmental Impact Report for the Joint Outfall System 2010 Master Facilities Plan (Whittier, California: County Sanitation Districts of Los Angeles County: November 1994), p. 8–10.

¹³⁰ Ogden Environmental and Energy Services, Draft Environmental Impact Report Chiquita Canyon Landfill Expansion and Resource Recovery Facilities (San Diego, California Los Angeles County Department of Regional Planning, May 1995), p. IV.H-2.

toxics' thresholds of significance. Gasoline stations can emit TACs, generally in the form of benzene from dispensing operations, tank "breathing" losses, and gasoline spillage. However, as previously demonstrated, assuming these emissions are benzene, the amount of VOCs from a gasoline station associated with the project is nominal. Therefore, any gasoline station operated on the site is not expected to emit TACs that would exceed the SCAQMD's thresholds of 10 cancer risks in 1 million.

Further, all regulated point sources of emissions associated with the project's Commercial Uses, should they occur, must be permitted and must use toxic best available control technologies before they can receive a permit.¹³¹ Compliance with the permit would reduce potential impacts associated with TACs to less than significant. The receipt and maintenance of SCAQMD permits represent verification that any such sources would not result in a significant impact under the first two and last criteria.

As to off-site sources of TACs, the project is not located within 0.25 mile of an existing facility that emits TACs as identified in SCAQMD Rule 1401, Table I. Chiquita Canyon Sanitary Landfill uses flaring operations to control methane gas emissions and the project site could be exposed to toxic emissions generated by these operations, which emit minor amounts of TACs, such as benzene, carbon tetrachloride, chloroform, dichlorobenzene, ethylene dichloride, perchloroethylene, and vinyl chloride.¹³² The recent EIR for the landfill expansion indicates that the location of maximum health risk associated with flaring operations for the expansion would be along the foothills south of the Santa Clara River within Newhall Ranch.¹³³ However, the incremental excess cancer risk at this location would be 0.33 in one million, which is less than the SCAQMD's maximum individual cancer risk level of 10 in 1 million.¹³⁴

¹³¹ SCAQMD, Rule 1401 – New Source Review of Toxic Air Contaminants, (Diamond Bar, California: SCAQMD, Amended ~~52~~ June ~~2009~~ May 2009). Rule 1401 may be viewed on-line at <http://www.aqmd.gov/rules/reg/reg14/r141401.pdf>.

¹³² Ogden Environmental and Energy Services, Draft Environmental Impact Report Chiquita Canyon Landfill Expansion and Resource Recovery Facilities (San Diego, California Los Angeles County Department of Regional Planning, May 1995), p. IV.G-23.

¹³³ *Ibid.*, p. IV.G-34.

¹³⁴ *Ibid.*, p. IV.G-34.

Future air emissions from the WRP, which would be constructed to the west of the site and which is not part of Landmark Village, were discussed in the Newhall Ranch Specific Plan Program EIR. The WRP has the potential to generate hazardous emissions from the storage of chlorine solution, diesel fuel, oil and lubricants, and polymer and laboratory chemicals on the site; however, these emissions would be less than significant for the following reasons: (1) Pursuant to SCAQMD Regulation XIV, the WRP would be required to obtain permits to construct and operate all new sources of air toxic emissions; (2) The WRP would be required to obtain permits to construct and operate all new sources of criteria air pollutants, at each stage of development, and whenever any new sources are added or replaced, pursuant to SCAQMD Regulation XIII; and (3) The receipt and maintenance of SCAQMD permits represent verification that any such sources would not result in a significant impact under the first two and last criteria.

Furthermore, the applicant for the WRP would be required to prepare and implement an “Integrated Emergency Response Plan” (IERP). The IERP would provide procedures for personnel medical emergencies, evacuation procedures, and mitigation and abatement procedures for hazardous chemicals. The plan must conform to multiple regulatory requirements, including 8 Cal.CodeRegs Section 3220, Emergency Action Plan; 8 Cal.CodeRegs Section 3221, Fire Prevention Plan; 8 Cal.CodeRegs Section 5192, Hazardous Waste Operations and Emergency Response; and 22 Cal.CodeRegs Sections 66265.50–66265.56, Contingency Plan and Emergency Procedures. As a result, potential for project residents, employees, and visitors to be exposed to toxic air contaminants is minimal and less than significant under these criteria.

(3) Operational Impacts Conclusion

Operationally-related CO, VOC, NO_x, and PM₁₀, including PM_{2.5}, emissions generated by the project would exceed SCAQMD recommended emission thresholds of significance for these pollutants and, for that reason, they are considered significant. As a result, feasible mitigation for these significant impacts is required both under the conditions imposed on the Newhall Ranch Specific Plan and under the requirements of the CEQA. The effectiveness of the required mitigation measures in reducing these potentially significant adverse air quality impacts is discussed below.

The project would be consistent with the 2007~~3~~ AQMP; therefore, it would not jeopardize the long-term attainment of the air quality standards predicted in that document. As discussed previously, if a project is planned in a way that results in the reduction/minimization of VMT both within the project and in the community in which it is located, and consequently the reduction/minimization of air pollutant emissions, that project is deemed to be consistent with the 2007~~3~~ AQMP.¹³⁵ The Landmark Village project and

¹³⁵ SCAQMD, *CEQA Air Quality Handbook*, (Diamond Bar, California: South Coast Air Quality Management District, November 1993), p. 12-5.

Newhall Ranch include a mobility system with alternatives to automobile use, including a system of pedestrian and bicycle trails, and infrastructure to accommodate a bus transit system, a railway right-of-way, and a park and ride lot. As such, the project would reduced~~minimize~~ VMT both within the project and within the community of Newhall Ranch as it builds out. Therefore, air emissions would be reduced~~minimized~~. The project also does not meet the additional indicators of potential air quality impacts.

d. Health Risk Assessment

A health risk assessment evaluates the health impacts due to diesel exhaust particulate matter (DPM) emitted by diesel trucks and equipment associated with construction of a proposed project. A Health Risk Assessment has been prepared for the proposed Landmark Village project and is found in Recirculated Draft EIR **Appendix 4.9** and Final EIR **Appendix F4.9**, and a summary of the assessment is provided herein. The proposed project site is bounded by SR-126 on the northern boundary and by the Santa Clara River on the southern boundary. The proposed project will consist of 308 single-family residential units; 1,136 multi-family units (approximately 685 condominiums and 451 apartments); up to 1,033,000 square feet of mixed-use/commercial uses (337,600 square feet [sq. ft.] of retail area and 695,400 sq. ft. of office space); 70,000 sq. ft. of school buildings; and 16.1 acres of park area. Total development is anticipated to occur over a 235-week period. Also, a utility corridor extending approximately 39,800 feet in length and 35 feet wide was considered as a part of the proposed project. The utility corridor includes the infrastructure components for potable water, sewer, reclaimed water, and natural gas. The sources of DPM include on-road trucks and diesel-powered construction equipment like front-end loaders, bulldozers, and scrapers.

The SCAQMD recommends the following significance criteria for health risk assessments:

- Criterion 1: a greater than 10 in one million (10×10^{-6}) lifetime probability of contracting cancer; and
- Criterion 2: a health hazard index of 1.0 for evaluating the non-carcinogenic effects of toxic air contaminants.

The health risk assessment analysis was conducted utilizing both the ISCST3 and AERMOD dispersion models; the results summarized below are based on the AERMOD model.

Using SCAQMD's thresholds of significance, the health risk assessment has concluded that the maximum anticipated cancer risks associated with construction of the proposed Landmark Village project are 0.312, 0.147, and 0.103 in one million at workplace, residential, and sensitive receptors, respectively. The assessment also has found that the chronic hazard indices for non-cancer health impacts are well below 1.0 at the maximally exposed receptors under this construction scenario. The health impacts associated

with the construction of the proposed project are below the significance criteria and, therefore, are less than significant.

8. MITIGATION MEASURES

Although the proposed Landmark Village project may result in potentially significant local and regional air quality impacts, the County already has imposed mitigation measures required to be implemented as part of the Newhall Ranch Specific Plan. These mitigation measures, as they relate to air quality, are found in the previously certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). In addition, this EIR identifies recommended mitigation measures specific to the Landmark Village project. The project applicant has committed to implementing both the applicable and feasible mitigation measures from the Newhall Ranch Specific Plan, and the project specific mitigation measures recommended for the proposed Landmark Village project. These Specific Plan mitigation measures, which follow immediately below, are preceded by "SP," which stands for Specific Plan. The project specific mitigation measures are presented thereafter in subsection 8c and are preceded by the designation "LV."

a. Mitigation Measures Already Incorporated into Specific Plan

- SP 4.10-1 The Specific Plan will provide Commercial and Service Uses in close proximity to residential subdivisions. *(The Landmark Village project provides Commercial and Service Uses in close proximity to residential subdivisions.)*
- SP 4.10-2 The Specific Plan will locate residential uses in close proximity to Commercial Uses, Mixed-Uses, and Business Parks. *(The Landmark Village project locates residential uses in close proximity to Commercial Uses and Mixed Uses.)*
- SP 4.10-3 Bus pull-ins will be constructed throughout the Specific Plan site. *(The Landmark Village project provides for bus pull-ins at designated locations.)*
- SP 4.10-4 Pedestrian facilities, such as sidewalks, and community regional, and local trails, will be provided throughout the Specific Plan site. *(Pedestrian facilities, such as sidewalks, bike paths, and trails, will be constructed throughout the Landmark Village project, with future connections to other on-site and off-site future developments and designated trails.)*
- SP 4.10-5 Roads with adjacent trails for pedestrian and bicycle use will be provided throughout the Specific Plan site connecting the individual Villages and community. *(Roads with adjacent trails for pedestrian and bicycle use will be provided throughout the Landmark Village project site with future connections to future developments within Newhall Ranch.)*

b. ~~Applicable Specific Plan Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan~~ as They Relate to the Landmark Village Project

The following nine mitigation measures were adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 2003). ~~Of the nine mitigation measures, eight measures are applicable to the Landmark Village project.~~ The applicable and feasible mitigation measures will be implemented in conjunction with the proposed Landmark Village project to mitigate potentially significant air quality impacts to the extent feasible.

Of the nine Specific Plan mitigation measures, three of the measures, either partially or wholly, are not feasible and/or applicable to the Landmark Village project. Because the Specific Plan would be built out over an estimated 20-year period, it was unknown at the time the Newhall Ranch Specific Plan Program EIR was prepared what technological developments or regulatory requirements may take place over the course of Specific Plan build out that may affect the identification and implementation of mitigation measures. Thus, it was unknown at the time of Specific Plan approval whether a particular mitigation action would be feasible at the time of implementation. Additionally, because the Specific Plan mitigation measures would apply to each tract map within the Specific Plan without distinction, certain measures would not be applicable to each subdivision. For example, mitigation identified for "Business Park" uses is not applicable to Landmark Village, which contains no Business Park uses as identified in the Specific Plan. As such, certain adopted Specific Plan mitigation measures included the qualifying phrase "if found applicable and feasible for that subdivision" in order to address these contingencies. ~~To address this issue, the Newhall Ranch Specific Plan Program EIR called for each future subdivision to implement those feasible measures in effect at the time a subdivision or other development project is filed within the Specific Plan area.~~

Consistent with the approach ~~taken~~ in the Newhall Ranch Specific Plan Program EIR, ~~the eight mitigation measures applicable to~~ two Specific Plan mitigation measures containing implementation actions that are either not applicable or feasible relative to the Landmark Village project (i.e., SP 4.10-7 and SP 4.10-9) have been replaced by project specific mitigation measures LV 4.9-6 and LV 4.9-8, respectively. These two measures, which are based on the adopted Specific Plan mitigation measures, have been revised to eliminate the qualifying phrase "if found applicable and feasible for that subdivision," and updated for applicability to the Landmark Village project and consistency with current SCAQMD regulations, and to reflect existing technologies. The basis for the revisions is provided in (italicized parenthetical text) following the Specific Plan mitigation measure below. In addition, Specific Plan mitigation measure SP 4.10-6 is replaced by LV 4.9-5 to eliminate the qualifying phrase "if found applicable and feasible for that subdivision." Lastly, Specific Plan mitigation measure SP 4.10-13 is entirely not applicable to Landmark Village as it relates to on-site subterranean parking structures, which

~~are not a part of Landmark Village. Deleted text is marked with a strikethrough while additions are marked through underlined text. It is assumed that With these limited exceptions, all Specific Plan mitigation measures will be implemented in full unless otherwise indicated.~~

(1) Construction Mitigation Measures

SP 4.10-6 The applicant of future subdivisions shall implement all rules and regulations adopted by the Governing Board of the SCAQMD which are applicable to the development of the subdivision (such as Rule 402 – Nuisance, Rule 403 – Fugitive Dust, Rule 1113 – Architectural Coatings) and which are in effect at the time of development. The purpose of Rule 403 is to reduce the amount of particulate matter entrained in the ambient air as a result of man-made fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or man-made condition capable of generating fugitive dust such as the mass and remedial grading associated with the project as well as weed abatement and stockpiling of construction materials (i.e., rock, earth, gravel). Rule 403 requires that grading operations either (1) take actions specified in Tables 1 and 2 of the Rule for each applicable source of fugitive dust and take certain notification and record keeping actions, or (2) obtain an approved Fugitive Dust Control Plan. A complete copy of the SCAQMD’s Rule 403 Implementation Handbook, which has been included in Recirculated Draft EIR **Appendix 4.10**, provides guideline tables to demonstrate the typical mitigation program and record keeping required for grading operations (Tables 1 and 2 and sample record-keeping chart). The record keeping is accomplished by on-site construction personnel, typically the construction superintendent.

Each future subdivision proposed in association with the Newhall Ranch Specific Plan shall implement the following if found applicable and feasible for that subdivision:

Grading

- a. Apply non-toxic soil stabilizers according to manufacturers’ specification to all inactive construction areas (previously graded areas inactive for 10 days or more).
- b. Replace groundcover in disturbed areas as quickly as possible.
- c. Enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers’ specifications, to exposed piles (i.e., gravel, sand, dirt) with 5 percent or greater silt content.
- d. Water active sites at least twice daily.
- e. Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour.
- f. Monitor for particulate emissions according to district-specified procedures.

- g. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least 2 feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer) in accordance with the requirements of CVC Section 23114.

Paved Roads

- h. Sweep paved streets at the end of the day if visible soil material is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water).
- i. Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.

Unpaved Roads

- j. Apply water three times daily, or non-toxic soil stabilizers according to manufacturers' specifications, to all unpaved parking or staging areas or unpaved road surfaces.
- k. Reduce traffic speeds on all unpaved roads to 15 miles per hour or less.
- l. Pave construction roads that have a traffic volume of more than 50 daily trips by construction equipment, 150 total daily trips for all vehicles.
- m. Pave all construction access roads at least 100 feet on to the site from the main road.
- n. Pave construction roads that have a daily traffic volume of less than 50 vehicular trips.

~~(As discussed above, for purposes of the Landmark Village project, Specific Plan mitigation measure SP 4.10-6 is replaced by project specific mitigation measure LV 4.9-5, which eliminates the phrase "if found applicable and feasible for that subdivision.") These measures control PM₁₀ emissions and would also control PM_{2.5} emissions. The effectiveness of these measures at reducing PM₁₀ emissions ranges from 7 to 92.5 percent.¹³⁶ For the purposes of this impact analysis, and to be consistent with URBEMIS2002 methodology, it is assumed that implementation of these measures would reduce PM_{2.5} and PM₁₀ emissions by a maximum of 50 percent.~~

SP 4.10-7 Prior to the approval of each future subdivision proposed in association with the Newhall Ranch Specific Plan, each of the construction emission reduction measures indicated below (and in Tables 11-2 and 11-3 of the SCAQMD's *CEQA Air Quality*

¹³⁶ SCAQMD, *CEQA Air Quality Handbook* (Diamond Bar, California: SCAQMD, November 1993), p. 11-15, and p. A11-77.

Handbook, as amended) shall be implemented if found applicable and feasible for that subdivision:

On-Road Mobile Source Construction Emissions

- a. Configure construction parking to minimize traffic interference.
- b. Provide temporary traffic controls when construction activities have the potential to disrupt traffic to maintain traffic flow (e.g., signage, flag person, detours).
- c. Schedule construction activities that affect traffic flow to off-peak hours (e.g., between 7:00 PM and 6:00 AM and between 10:00 AM and 3:00 PM).
- d. Develop a trip reduction plan to achieve a 1.5 average vehicle ridership (AVR) for construction employees.
- e. Implement a shuttle service to and from retail services and food establishments during lunch hours.
- f. Develop a construction traffic management plan that includes the following measures to address construction traffic that has the potential to affect traffic on public streets:
 - Rerouting construction traffic off congested streets;
 - Consolidating truck deliveries; and
 - Providing temporary dedicated turn lanes for movement of construction trucks and equipment on and off of the site.
- g. Prohibit truck idling in excess of two minutes.

Off-Road Mobile Source Construction Emissions

- h. Use methanol-fueled pile drivers. *(Infeasible as written due to the present market for alternative fuels for use in construction equipment. Revised to provide greater flexibility in the selection of alternative fuel types.)*
- i. Suspend use of all construction equipment operations during second stage smog alerts.
- j. Prevent trucks from idling longer than two minutes.
- k. Use electricity from power poles rather than temporary diesel-powered generators.

- l. Use electricity from power poles rather than temporary gasoline-powered generators.
- m. Use methanol- or natural gas-powered mobile equipment instead of diesel. (Infeasible as written due to the present market for alternative fuels for use in construction equipment. Revised to provide greater flexibility in the selection of alternative fuel types.)
- n. Use propane- or butane-powered on-site mobile equipment instead of gasoline. (Infeasible as written due to the present market for alternative fuels for use in construction equipment. Revised to provide greater flexibility in the selection of alternative fuel types.)

(As discussed above, for purposes of the Landmark Village project, Specific Plan mitigation measure 4.10-7 is replaced by project specific mitigation measure LV 4.9-6.)

(2) Operational Mitigation Measures

(a) Point Source Operational Emissions

SP 4.10-8 The applicant of future subdivisions shall implement all rules and regulations adopted by the Governing Board of the SCAQMD which are applicable to the development of the subdivision (such as Rule 402 – Nuisance, Rule 461 – Gasoline Transfer And Dispensing, Rule 1102 – Petroleum Solvent Dry Cleaners, Rule 1111 – NO_x Emissions from Natural Gas-Fired, Fan-Type Central Furnaces, Rule 1138 – Control Of Emissions From Restaurant Operations, Rule 1146 – Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters) and which are in effect at the time of occupancy permit issuance.

(b) Mobile Source Operational Emissions

SP 4.10-9 Prior to the approval of each future subdivision proposed in association with the Newhall Ranch Specific Plan, each of the operational emission reduction measures indicated below (and in Tables 11-6 and 11-7 of the SCAQMD's *CEQA Air Quality Handbook*, as amended) shall be implemented if found applicable and feasible for that subdivision.

On Road Mobile Source Operational Emissions

Residential Uses

- a. Include satellite telecommunications centers in residential subdivisions (~~Removed~~ No longer applicable as growth of internet allows residents to telecommute from home using personal computers.)

- b. Establish shuttle service from residential subdivision to commercial core areas. (Infeasible as written; shuttle services to be provided by commercial uses and public transit.)
- c. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters).
- d. Construct off-site pedestrian facility improvements, such as overpasses and wider sidewalks.
- e. Include retail services within or adjacent to residential subdivisions.
- f. Provide shuttles to major rail transit centers or multi-modal stations. (Infeasible as written; shuttle services to be provided by commercial uses and public transit.)
- g. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.).
- h. Synchronize traffic lights on streets impacted by development.
- i. Construct, contribute, or dedicate land for the provision of off-site bicycle trails linking the facility to designated bicycle commuting routes.

Commercial Uses

- j. Provide preferential parking spaces for carpools and vanpools and provide 7 foot 2 inch minimum vertical clearance in parking facilities for vanpool access.
- k. Implement on-site circulation plans in parking lots to reduce vehicle queuing.
- l. Improve traffic flow at drive-throughs by designing separate windows for different functions and by providing temporary parking for orders not immediately available for pickup.
- m. Provide videoconference facilities. (No longer applicable as growth of internet allows employees to attend videoconference from home using personal computers.)
- n. Set up resident worker training programs to improve job/housing balance.
- o. Implement home dispatching system where employees receive routing schedule by phone instead of driving to work. (No longer applicable as growth of internet allows employees to attend videoconference from home using personal computers.)

- p. Develop a program to minimize the use of fleet vehicles during smog alerts (for business not subject to Regulation XV (now Rule 2202) or XII). *(Not applicable to Landmark Village project as the commercial uses to be developed in this subdivision will be neighborhood supporting uses that do not utilize commercial vehicle fleets.)*
- q. Use low-emissions fleet vehicles:
- TLEV
 - ULEV
 - LEV
 - ZEV

(Not applicable to Landmark Village project as the commercial uses to be developed in this subdivision will be neighborhood supporting uses that do not utilize commercial vehicle fleets.)

- r. Reduce employee parking spaces for those businesses subject to Regulation XV (now Rule 2202). *(Rule 2202 applies to employers with more than 250 employees on a single worksite. The Landmark Village project does not include Business Park or similar uses that would generate significant levels of employment at a single location.)*
- s. Implement a lunch shuttle service from a worksite(s) to food establishments. *(Consistent with Rule 2202, this measure applies to employers with more than 250 employees on a single worksite. The Landmark Village project would not include the types of uses that would generate significant levels of employees at a single location. Therefore, this measure is not applicable to Landmark Village.)*
- t. Implement compressed workweek schedules where weekly work hours are compressed into fewer than five days.
- 9/80
 - 4/40
 - 3/36

(The Landmark Village project does not include the types of uses that would generate significant levels of employment at a single location. Therefore, this measure is considered not applicable.)

- u. Develop a trip reduction plan to achieve 1.5 AVR for businesses with less than 100 employees or multi-tenant worksites. *(This measure is considered not applicable, because the uses proposed by the Landmark Village project are not suited for imposition of a trip reduction plan. In addition, the requirement to achieve a specific AVR has been ruled unlawful and, therefore, is no longer recommended.)*
- v. Utilize satellite offices rather than regular worksite to reduce VMT. *(~~Removed~~ No longer applicable as growth of internet allows employees to work from home on personal computers.)*
- w. Establish a home-based telecommuting program. *(No longer applicable as growth of internet allows employees to work from home on personal computers.)*
- x. Provide on-site child care and after-school facilities or contribute to off-site development within walking distance. *(Consistent with Rule 2202, this measure applies to employers with more than 250 employees on a single worksite. The Landmark Village project would not include the types of uses that would generate significant levels of employees at a single location. Therefore, this measure is not applicable to Landmark Village.)*
- y. Require retail facilities or special event centers to offer travel incentives such as discounts on purchases for transit riders.
- z. Provide on-site employee services such as cafeterias, banks, etc. *(Consistent with Rule 2202, this measure applies to employers with more than 250 employees on a single worksite. The Landmark Village project would not include the types of uses that would generate significant levels of employees at a single location. Therefore, this measure is not applicable to Landmark Village.)*
- aa. Establish a shuttle service from residential core areas to the worksite. *(Infeasible as written due to the unlimited scope of worksite locations.)*
- ab. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters).
- ac. Implement a pricing structure for single-occupancy employee parking and/or provide discounts to ridesharers.
- ad. Include residential units within a commercial project.
- ae. Utilize parking in excess of code requirements as on-site park-n-ride lots or contribute to construction of off-site lots.

af. Any two of the following:

- Construct off-site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on-site improvements, such as bicycle paths.
- Include bicycle parking facilities, such as bicycle lockers and racks.
- Include showers for bicycling employees' use.

ag. Any two of the following:

- Construct off-site pedestrian facility improvements, such as overpasses, wider sidewalks.
- Construct on-site pedestrian facility improvements, such as building access that is physically separated from street and parking lot traffic and walk paths.
- Include showers for pedestrian employees' use.

ah. Provide shuttles to major rail transit stations and multi-modal centers. (Infeasible as written due to the unlimited scope of shuttle routes.)

ai. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.).

aj. Charge visitors to park. (Infeasible as written due to the business implications of establishing parking fees at certain commercial uses (e.g., grocery stores, big-box retailers).)

ak. Synchronize traffic lights on streets impacted by development.

al. Reschedule truck deliveries and pickups to off-peak hours.

am. Set up paid parking systems where drivers pay at walkup kiosk and exit via a stamped ticket to reduce emissions from queuing vehicles.

an. Require on-site truck loading zones.

ao. Implement or contribute to public outreach programs.

ap. Require employers not subject to Regulation XV (now Rule 2202) to provide commuter information area.

Business Park Uses

- aq. Provide preferential parking spaces for carpools and vanpools and provide 7'2" minimum vertical clearance in parking facilities for vanpool access. *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to preferential parking spaces for carpools and vanpools in Business Park uses. The Landmark Village project does not propose a Business Park.)*

- ar. Implement on-site circulation plans in parking lots to reduce vehicle queuing. *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to improved circulation within Business Park parking lots. The Landmark Village project does not propose a Business Park.)*

- as. Set up resident worker training programs to improve job/housing balance. *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to resident worker training programs for Business Park employees. The Landmark Village project does not propose a Business Park.)*

- at. Implement home dispatching system where employees receive routing schedule by phone instead of driving to work. *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to establishment of home dispatching system for Business Park employees. The Landmark Village project does not propose a Business Park.)*

- au. Develop a program to minimize the use of fleet vehicles during smog alerts (for business not subject to Regulation XV (now Rule 2202) or XII). *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to creation of a program designed to reduce use of vehicle fleets. The Landmark Village project does not propose a Business Park.)*

- av. Use low-emissions fleet vehicles:
 - TLEV
 - ULEV
 - LEV
 - ZEV

(This mitigation measure is not applicable to the Landmark Village project. The measure promotes use of alternative fuels in vehicle fleets. The Landmark Village project does not propose a Business Park.)

- aw. Require employers not subject to Regulation XV (now Rule 2202) to provide commuter information area. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires employers in Business Parks to provide commuter information area. The Landmark Village project does not propose a Business Park.)*

- ax. Reduce employee parking spaces for those businesses subject to Regulation XV (now Rule 2202). *(This mitigation measure is not applicable to the Landmark Village project. The measure requires employers in Business Parks to limit employee parking. The Landmark Village project does not propose a Business Park.)*

measure requires uses within the Business Park to orient the structure to account for passive solar design. The Landmark Village project does not propose a Business Park.)

- cu. Increase walls and attic insulation beyond Title 24 requirements. *(This mitigation measure has been omitted because it is not applicable to the Landmark Village project. The measure requires uses within the Business Park to increase wall insulation beyond code requirements. The Landmark Village project does not propose a Business Park.)*
- cv. Improved storage and handling of source materials. *(This mitigation measure has been omitted because it is not applicable to the Landmark Village project. The measure requires uses within the Business Park to improve storage and handling. The Landmark Village project does not propose a Business Park.)*
- cw. Materials substitution (e.g., use water-based paints, life-cycle analysis). *(This mitigation measure has been omitted because it is not applicable to the Landmark Village project. The measure requires uses within the Business Park to conduct materials substitution in their processes. The Landmark Village project does not propose a Business Park.)*
- cx. Modify manufacturing processes (e.g., reduce process stages, closed-loop systems, materials recycling). *(This mitigation measure has been omitted because it is not applicable to the Landmark Village project. The measure addresses manufacturing uses within a Business Park. The Landmark Village project does not propose a Business Park.)*
- cy. Resource recovery systems that redirect chemicals to new production processes. *(This mitigation measure has been omitted because it is not applicable to the Landmark Village project. The measure addresses manufacturing uses within a Business Park. The Landmark Village project does not propose a Business Park.)*

(As discussed above, for purposes of the Landmark Village project, Specific Plan mitigation measure SP 4.10-9 is replaced by project specific mitigation measure LV 4.9-8.)

- SP 4.10-10 All non-residential development of 25,000 gross square feet or more shall comply with the County's Transportation Demand Management Ordinance (Ordinance No. 93-0028M) in effect at the time of subdivision. The sizes and configurations of the Specific Plan's non-residential uses are not known at this time and the Ordinance specifies different requirements based on the size of the project under review. All current provisions of the ordinance are summarized in Appendix 4.10.
- SP 4.10-11 Subdivisions and buildings shall comply with Title 24 of the California Code of Regulations which are current at the time of development.

- SP 4.10-12 Lighting for public streets, parking areas, and recreation areas shall utilize energy efficient light and mechanical, computerized or photo cell switching devices to reduce unnecessary energy usage.
- SP 4.10-13 Any on-site subterranean parking structures shall provide adequate ventilation systems to disperse pollutants and preclude the potential for a pollutant concentration to occur. *(This mitigation measure it is not applicable to the Landmark Village project. The measure addresses ventilation of subterranean parking garages. The Landmark Village project does not propose such parking facilities.)*
- SP 4.10-14 The sellers of new residential units shall be required to distribute brochures and other relevant information published by the SCAQMD or similar organization to new homeowners regarding the importance of reducing VMT and related air quality impacts, as well as on local opportunities for public transit and ridesharing.

c. Mitigation Measures Recommended for this Project

The following project-specific mitigation measures are recommended to mitigate the potentially significant air quality impacts that may occur with implementation of the Landmark Village project. These mitigation measures are in addition to those adopted in the previously certified Newhall Ranch Specific Plan Program EIR. To reflect that these measures relate specifically to the Landmark Village project, they are preceded with the "LV" designation, used below.

(1) Construction Mitigation Measures

- LV4.9-1 Maintain construction equipment and vehicle engines in good condition and in proper tune as per manufacturers' specifications and per SCAQMD rules, to minimize exhaust emissions.
- LV4.9-2 All on-road and off-road construction equipment shall use aqueous fuel, to the extent feasible, as determined by the County of Los Angeles.

Aqueous fuel is a stable emulsion of up to 55 percent water and petroleum-based naphtha (a petroleum product from the earliest stages of the refinery process), with trace amounts of bonding and winterizing agents. It can be used to run both gasoline and diesel engines. Aqueous fuel is clean-burning and, based on information provided in the URBEMIS2007~~2~~ model for its use in construction equipment, it can reduce NO_x emissions by 154 percent and PM₁₀, including PM_{2.5}, emissions by 5063 percent.

- LV4.9-3 All on-road and off-road construction equipment shall employ cooled exhaust gas recirculation technology, to the extent feasible, as determined by the County of Los Angeles.

Cooled exhaust gas recirculation (EGR) reduces CO, VOC, NO_x, and PM₁₀, including PM_{2.5}, emissions as follows: Oxygen is required for fuel to be consumed in a combustion engine. The high temperatures found within combustion engines cause nitrogen in the surrounding air to react with any unused oxygen from the combustion process to form NO_x. EGR technology directs some of the exhaust gases that have already been used by the engine and no longer contain much oxygen back into the intake of the engine. By mixing the exhaust gases with fresh air, the amount of oxygen entering the engine is reduced. Since

there is less oxygen to react with, fewer nitrogen oxides are formed and the amount of nitrogen oxides that a vehicle releases into the atmosphere is decreased. The URBEMIS2007 model does not estimate emissions reductions from EGR. Based on information provided in the URBEMIS2002 model for its use in construction equipment, cooled exhaust gas recirculation technology can reduce CO and VOC emissions by 90 percent, NO_x emissions by 40 percent and PM₁₀ emissions by 85 percent.

LV4.9-4 All on-road and off-road construction equipment shall employ diesel particulate filters,⁷

Diesel particulate filters which can reduce PM₁₀ emissions from construction equipment by as much as 85 percent based on information provided in the URBEMIS2007² model.

LV 4.9-4a On-road construction trucks shall be routed away from sensitive receptor areas.

LV 4.9-4b Require all on-site construction equipment to meet EPA Tier 2 or higher emissions standards according to the following schedule:

- April 1, 2010, to December 31, 2011: All offroad diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 2 offroad emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 2 or Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.
- January 1, 2012, to December 31, 2014: All offroad diesel-powered construction equipment greater than 50 hp shall meet Tier 3 offroad emissions standards. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.
- Post-January 1, 2015: All offroad diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.
- A copy of each unit's certified tier specification, BACT documentation, and CARB or AQMD operating permit shall be provided at the time of mobilization of each applicable unit of equipment.

LV4.9-5 (Replaces Mitigation Measure Specific Plan 4.10-6) The applicant shall implement all rules and regulations adopted by the Governing Board of the SCAQMD which are applicable to the development of the subdivision (such as Rule 402 – Nuisance, Rule 403 – Fugitive Dust, Rule 1113 – Architectural Coatings) and which are in effect at the time of development. The purpose of Rule 403 is to reduce the amount of particulate matter entrained in the ambient air as a result of man-made fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or man-made condition capable of generating fugitive dust such as the mass and remedial grading associated with the project as well as weed abatement and stockpiling of construction materials (i.e., rock, earth, gravel). Rule 403 requires that grading operations either (1) take actions specified in Tables 1 and 2 of the Rule for each applicable source of fugitive dust and take certain notification and record keeping actions, or (2) obtain an approved Fugitive Dust Control Plan. A complete copy of the SCAQMD's Rule 403 Implementation Handbook, which has been included in Recirculated Draft EIR Appendix 4.10, provides guideline tables to demonstrate the typical mitigation program and record keeping required for grading operations (Tables 1 and 2 and sample record-keeping chart). The record keeping is accomplished by on-site construction personnel, typically the construction superintendent.

The project applicant or its designee shall implement the following:

Grading

- a. Apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for 10 days or more).
- b. Replace groundcover in disturbed areas as quickly as possible.
- c. Enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications, to exposed piles (i.e., gravel, sand, dirt) with 5 percent or greater silt content.
- d. Water active sites at least twice daily.
- e. Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour.
- f. Monitor for particulate emissions according to district-specified procedures.
- g. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least 2 feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer) in accordance with the requirements of CVC Section 23114.

Paved Roads

h. Sweep paved streets at the end of the day if visible soil material is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water).

i. Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.

Unpaved Roads

j. Apply water three times daily, or non-toxic soil stabilizers according to manufacturers' specifications, to all unpaved parking or staging areas or unpaved road surfaces.

k. Reduce traffic speeds on all unpaved roads to 15 miles per hour or less.

l. Pave construction roads that have a traffic volume of more than 50 daily trips by construction equipment, 150 total daily trips for all vehicles.

m. Pave all construction access roads at least 100 feet on to the site from the main road.

n. Pave construction roads that have a daily traffic volume of less than 50 vehicular trips.

LV4.9-6 (Replaces Mitigation Measure SP 4.10-7) Prior to the approval of each future subdivision proposed in association with Landmark Village, each of the construction emission reduction measures indicated below, which are based on Tables 11-2 and 11-3 of the SCAQMD's CEQA Air Quality Handbook, shall be implemented:

On-Road Mobile Source Construction Emissions

a. Configure construction parking to minimize traffic interference.

b. Provide temporary traffic controls when construction activities have the potential to disrupt traffic to maintain traffic flow (e.g., signage, flag person, detours).

c. Schedule construction activities that affect traffic flow to off-peak hours (e.g., between 7:00 PM and 6:00 AM and between 10:00 AM and 3:00 PM).

d. Develop a trip reduction plan to achieve a 1.5 average vehicle ridership (AVR) for construction employees.

e. Implement a shuttle service to and from retail services and food establishments during lunch hours.

f. Develop a construction traffic management plan that includes the following measures to address construction traffic that has the potential to affect traffic on public streets:

- Rerouting construction traffic off congested streets;

- Consolidating truck deliveries; and

- Providing temporary dedicated turn lanes for movement of construction trucks and equipment on and off of the site.

g. Prohibit truck idling in excess of two minutes.

Off-Road Mobile Source Construction Emissions

h. Use pile drivers powered by an alternative to diesel fuel.

i. Suspend use of all construction equipment operations during second stage smog alerts.

j. Prevent trucks from idling longer than two minutes.

k. Use electricity from power poles rather than temporary diesel-powered generators.

l. Use electricity from power poles rather than temporary gasoline-powered generators.

m. Use mobile equipment powered by an alternative to diesel fuel.

n. Use on-site mobile equipment powered by an alternative to gasoline.

Construction Emissions With Mitigation

Although substantial mitigation is recommended for the project's construction-related emissions, **Mitigation Measures LV 4.9-2, and 4.9-3, and 4.9-4** are based on technology unproven on a large scale and which may be infeasible for some equipment. However, if these mitigation measures are found feasible at the time of construction, the project's construction-related CO, VOC, NO_x, and PM₁₀, including PM_{2.5}, emissions would be reduced substantially, as shown in **Table 4.9-27, Estimated Mitigated Construction Emissions**. ~~In particular, implementation of these mitigation measures, if feasible, would reduce CO emissions exceedances from 51 months to less than 2 months.~~ However, even with the implementation of these mitigation measures, if feasible, construction emission thresholds for CO, VOC, NO_x, and PM₁₀, including PM_{2.5}, emissions would still be exceeded ~~for approximately 48, 48, and 11~~

months, respectively.¹³⁷ As a result, construction air quality impacts are considered significant and unavoidable.

Table 4.9-27
Estimated Mitigated Construction Emissions

Subphase/Emissions Source	Emissions (lbs/day)					Mitigation
	CO	VOC	NO _x	SO _x	PM ₁₀	
Weeks 1 thru 19						
Unmitigated Emissions Total	<u>475.33</u>	<u>117.27</u>	<u>1,068.47</u>	<u>0.130.65</u>	<u>1,923.62</u>	
	<u>1,904.84</u>	<u>295.29</u>	<u>1,531.46</u>		<u>6,863.21</u>	
Mitigated Emissions Total	<u>475.33</u>	<u>117.27</u>	<u>920.16</u>	<u>0.130.02</u>	<u>1,891.35¹</u>	Rule 403
	<u>247.93</u>	<u>91.79</u>	<u>709.82</u>		<u>6,765.07</u>	
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	Aqueous Fuel
Exceeds Thresholds?	NO	YES	YES	NO	YES	<u>Diesel Particulate</u> <u>Filter (DPF)</u> <u>Cooled EGR</u>
Notes: No Demolition, Pavement and Asphalt, or Building Construction during this subphase. Assumes conformance with Fugitive Dust Rule 403.						
¹ <u>Includes 405.03 pounds of mitigated PM_{2.5} emissions, which exceed the 55 pound significance threshold.</u>						
Weeks 20 thru 39						
Unmitigated Emissions Total	<u>764.59</u>	<u>191.69</u>	<u>1,700.58</u>	<u>0.170.81</u>	<u>2,431.89</u>	
	<u>3,285.77</u>	<u>467.09</u>	<u>2,676.20</u>		<u>6,903.47</u>	
Mitigated Emissions Total	<u>764.59</u>	<u>191.69</u>	<u>1,459.38</u>	<u>0.170.13</u>	<u>2,377.65²</u>	Rule 403
	<u>407.61</u>	<u>112.45</u>	<u>1,243.04</u>		<u>6,736.10</u>	
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	Aqueous Fuel
Exceeds Thresholds?	<u>YES</u> NO	YES	YES	NO	YES	<u>Diesel Particulate</u> <u>Filter (DPF)</u> <u>Cooled EGR</u>
Notes: No Demolition or Building Construction during this subphase. Assumes conformance with Fugitive Dust Rule 403, and use of low VOC asphalt.						
² <u>Includes 512.20 pounds of mitigated PM_{2.5} emissions, which exceed the 55 pound significance threshold.</u>						

¹³⁷ The RDEIR identified CO post-mitigation construction emissions as continuing to exceed applicable significance thresholds. See Table 4.9-27. The omission of CO from the listing of emissions in this text was an inadvertent error.

Subphase/Emissions Source	Emissions (lbs/day)					Mitigation
	CO	VOC	NO _x	SO _x	PM ₁₀	
Weeks 40 thru 46						
Unmitigated Emissions Total	<u>1,058.30</u>	<u>303.71</u>	<u>2,428.89</u>	<u>0.180.79</u>	<u>2,466.19</u>	
	5,007.45	844.93	4,329.78		6,983.38	
Mitigated Emissions Total	<u>1,058.30</u>	<u>303.71</u>	<u>2,078.89</u>	<u>0.180.11</u>	<u>2,386.48³</u>	Rule 403
	615.15	289.83	2,003.41		6,708.12	
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	Aqueous Fuel
Exceeds Thresholds?	YES	YES	YES	NO	YES	<u>Diesel Particulate</u> <u>Filter (DPF)</u> <u>Cooled EGR</u>
Notes: No Demolition during this subphase.						
Assumes conformance with Fugitive Dust Rule 403, and use of low VOC asphalt.						
³ <u>Includes 520.18 pounds of mitigated PM_{2.5} emissions, which exceed the 55 pound significance threshold.</u>						
Weeks 47 thru 91						
Unmitigated Emissions Total	<u>642.89</u>	<u>188.97</u>	<u>1,376.08</u>	<u>0.140.15</u>	<u>65.22</u>	
	3,102.61	549.63	2,798.32		131.16	
Mitigated Emissions Total	<u>642.89</u>	<u>188.97</u>	<u>1,174.38</u>	<u>0.140.09</u>	<u>17.79⁴</u>	Aqueous Fuel
	367.22	198.03	1,293.59		0.00	
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	<u>Diesel Particulate</u> <u>Filter (DPF)</u> <u>Cooled EGR</u>
Exceeds Thresholds?	<u>YES</u> NO	YES	YES	NO	NO	
Notes: No Demolition or Grading during this subphase.						
Assumes conformance with Fugitive Dust Rule 403, and use of low VOC asphalt.						
⁴ <u>Includes 16.00 pounds of mitigated PM_{2.5} emissions, which is below the 55 pound significance threshold.</u>						
Week 92						
Unmitigated Emissions Total	<u>622.94</u>	<u>196.86</u>	<u>1,435.16</u>	<u>0.050.06</u>	<u>67.75</u>	
	3,603.81	603.46	3,035.29		122.52	
Mitigated Emissions Total	<u>622.94</u>	<u>196.86</u>	<u>1,221.69</u>	0.05	<u>17.46⁵</u>	Aqueous Fuel
	421.17	204.32	1,403.05		0.00	
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	<u>Diesel Particulate</u> <u>Filter (DPF)</u> <u>Cooled EGR</u>
Exceeds Thresholds?	<u>YES</u> NO	YES	YES	NO	NO	
Notes: No Demolition or Grading during this subphase.						
Assumes conformance with Fugitive Dust Rule 403, and use of low VOC asphalt and architectural coatings.						
⁵ <u>Includes 15.95 pounds of mitigated PM_{2.5} emissions, which is below the 55 pound significance threshold.</u>						

Subphase/Emissions Source	Emissions (lbs/day)					Mitigation
	CO	VOC	NO _x	SO _x	PM ₁₀	
Weeks 93 thru 144						
Unmitigated Emissions Total	<u>642.49</u>	<u>177.84</u>	<u>1,326.41</u>	<u>0.140.05</u>	<u>63.01</u>	
	3,306.30	555.86	2,790.95		112.86	
Mitigated Emissions Total	<u>642.49</u>	<u>177.84</u>	<u>1,130.44</u>	<u>0.140.05</u>	<u>16.88⁶</u>	Aqueous Fuel
	385.62	189.23	1,290.00		0.00	
SCAQMD Thresholds	550.00	75.00	100.00	150.00	<u>55.00</u>	<u>Diesel Particulate Filter (DPF)</u> <u>Cooled EGR</u>
Exceeds Thresholds?	<u>YES</u> NO	YES	YES	NO	<u>NO</u>	
Notes: No Demolition or Grading during this subphase.						
Assumes use of low VOC asphalt and architectural coatings.						
⁶ Includes 15.17 pounds of mitigated PM _{2.5} emissions, which is below the 55 pound significance threshold.						
Weeks 145 thru 158						
Unmitigated Emissions Total	<u>534.31</u>	<u>160.25</u>	<u>1,139.61</u>	<u>0.070.05</u>	<u>54.67</u>	
	3,126.78	528.79	2,527.25		97.52	
Mitigated Emissions Total	<u>534.31</u>	<u>160.25</u>	<u>970.89</u>	<u>0.070.04</u>	<u>14.38⁷</u>	Aqueous Fuel
	359.40	186.46	1,167.78		0.00	
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	<u>Diesel Particulate Filter (DPF)</u> <u>Cooled EGR</u>
Exceeds Thresholds?	NO	YES	YES	NO	NO	
Notes: No Demolition or Grading during this subphase.						
Assumes use of low VOC asphalt and architectural coatings.						
⁷ Includes 13.04 pounds of mitigated PM _{2.5} emissions, which is below the 55 pound significance threshold.						

Subphase/Emissions Source	Emissions (lbs/day)					Mitigation
	CO	VOC	NO _x	SO _x	PM ₁₀	
Weeks 159 thru 178						
Unmitigated Emissions Total	<u>271.68</u>	<u>91.64</u>	<u>551.13</u>	<u>0.05</u> 0.03	<u>26.18</u>	
	1,764.79	358.43	1,402.96		53.80	
Mitigated Emissions Total	<u>271.68</u>	<u>91.64</u>	<u>469.36</u>	<u>0.05</u> 0.03	<u>6.91</u> ⁸	Aqueous Fuel
	210.84	167.17	648.81		0.00	
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	<u>Diesel Particulate</u> <u>Filter (DPF)</u> <u>Cooled EGR</u>
Exceeds Thresholds?	NO	YES	YES	NO	NO	
Notes: No Demolition, Grading, or Pavement and Asphalt during this subphase. Assumes use of low VOC asphalt and architectural coatings.						
⁸ <u>Includes 6.23 pounds of mitigated PM_{2.5} emissions, which is below the 55 pound significance threshold.</u>						
Weeks 179 thru 196						
Unmitigated Emissions Total	<u>233.03</u>	<u>80.61</u>	<u>476.87</u>	<u>0.04</u> 0.03	<u>22.42</u>	
	1,549.32	332.26	1,245.55		48.53	
Mitigated Emissions Total	<u>233.03</u>	<u>80.61</u>	<u>406.11</u>	<u>0.04</u> 0.03	<u>5.91</u> ⁹	Aqueous Fuel
	185.74	168.78	576.42		0.00	
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	<u>Diesel Particulate</u> <u>Filter (DPF)</u> <u>Cooled EGR</u>
Exceeds Thresholds?	NO	YES	YES	NO	NO	
Notes: No Demolition, Grading, or Pavement and Asphalt during this subphase. Assumes use of low VOC asphalt and architectural coatings.						
⁹ <u>Includes 5.34 pounds of mitigated PM_{2.5} emissions, which is below the 55 pound significance threshold.</u>						
Weeks 197 thru 210						
Unmitigated Emissions Total	<u>151.89</u>	<u>53.65</u>	<u>323.81</u>	0.02	<u>14.98</u>	
	1,064.36	218.82	854.79		33.26	
Mitigated Emissions Total	<u>151.89</u>	<u>53.65</u>	<u>275.65</u> 4.34	0.02	<u>3.90</u> ¹⁰	Aqueous Fuel
	23.03	90.21			0.20	
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	<u>Diesel Particulate</u> <u>Filter (DPF)</u> <u>Cooled EGR</u>
Exceeds Thresholds?	NO	<u>NO</u> YES	<u>YES</u> NO	NO	NO	
Notes: No Demolition, Grading, or Pavement and Asphalt during this subphase. Assumes use of low VOC architectural coatings.						

Subphase/Emissions Source	Emissions (lbs/day)					Mitigation
	CO	VOC	NO _x	SO _x	PM ₁₀	
¹⁰ <u>Includes 3.51 pounds of mitigated PM_{2.5} emissions, which is below the 55 pound significance threshold.</u>						
Weeks 211 thru 220						
Unmitigated Emissions Total	<u>101.08</u>	<u>35.75</u>	<u>209.78</u>	0.01	<u>9.28</u>	
	794.57	134.83	596.44		22.03	
Mitigated Emissions Total	<u>101.08</u>	<u>35.75</u>	<u>178.43</u>	0.01	<u>2.37¹¹</u>	Aqueous Fuel
	15.00	40.94			0.14	
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	<u>Diesel Particulate</u> <u>Filter (DPF)</u> <u>Cooled EGR</u>
Exceeds Thresholds?	NO	NO	<u>YES</u> NO	NO	NO	
Notes: No Demolition, Grading, or Pavement and Asphalt during this subphase. Assumes use of low VOC asphalt and architectural coatings.						
¹¹ <u>Includes 2.16 pounds of mitigated PM_{2.5} emissions, which is below the 55 pound significance threshold.</u>						
Weeks 221 thru 235						
Unmitigated Emissions Total	<u>59.47</u>	<u>22.02</u>	<u>128.35</u>	<u>0.00</u> 0.01	<u>5.43</u>	
	500.54	71.95	374.61		13.72	
Mitigated Emissions Total	<u>59.47</u>	<u>22.02</u>	<u>109.14</u>	<u>0.00</u> 0.01	<u>1.38¹²</u>	Aqueous Fuel
	58.05	18.70	173.21		0.00	
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	<u>Diesel Particulate</u> <u>Filter (DPF)</u> <u>Cooled EGR</u>
Exceeds Thresholds?	NO	NO	YES	NO	NO	
Notes: No Demolition, Grading, or Pavement and Asphalt during this subphase. Assumes use of low VOC architectural coatings.						
¹² <u>Includes 1.26 pounds of mitigated PM_{2.5} emissions, which is below the 55 pound significance threshold.</u>						

Subphase/Emissions Source	Emissions (lbs/day)					Mitigation
	CO	VOC	NO _x	SO _x	PM ₁₀	
Beg. 2015 (196 Weeks) ¹						
Unmitigated Emissions Total	<u>143.93</u>	<u>50.59</u>	<u>220.62</u>	<u>0.08</u> 0.03	<u>9.35</u>	
	<u>905.93</u>	<u>147.09</u>	<u>669.17</u>		<u>24.03</u>	
Mitigated Emissions Total	<u>143.93</u>	<u>50.59</u> 51.5	<u>188.45</u>	<u>0.08</u> 0.03	<u>2.84</u> ¹³	Aqueous Fuel
	<u>110.22</u>		<u>310.01</u>		<u>0.00</u>	
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	<u>Diesel Particulate</u> <u>Filter (DPF)</u> <u>Cooled EGR</u>
Exceeds Thresholds?	NO	NO	YES	NO	NO	
Notes: No Demolition, Grading, or Pavement and Asphalt during this subphase.						
¹³ <u>Includes 2.42 pounds of mitigated PM_{2.5} emissions, which is below the 55 pound significance threshold.</u>						

Source: Impact Sciences, Inc., Air quality calculations can be found in Recirculated Draft EIR **Appendix 4.9**.

¹ As a worst-case scenario, assumes all associated grading and pavement/asphalt is completed during the first three subphases.

(2) Operational Mitigation Measures

(a) Point Source Operational Emissions

LV4.9-75 Any dry cleaners proposing to locate on site shall utilize the services of off-site cleaning operations at already SCAQMD-permitted locations. No on-site dry cleaning operations shall be permitted within Landmark Village.

(b) Mobile Source Operational Emissions

LV4.9-87 (Replaces Mitigation Measure SP 4.10-9) Prior to the approval of each future subdivision proposed in association with Landmark Village, each of the operational emission reduction measures indicated below, which are based on Tables 11-6 and 11-7 of the SCAQMD's CEQA Air Quality Handbook, shall be implemented.

On Road Mobile Source Operational Emissions

Residential Uses

- a. Provide residents with information regarding the availability of existing shuttle service providers and public transit.
- b. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters).

- c. Construct off-site pedestrian facility improvements, such as overpasses and wider sidewalks.
- d. Include retail services within or adjacent to residential subdivisions.
- e. Provide residents with information regarding the availability of existing shuttle service providers and public transit.
- f. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.).
- g. Synchronize traffic lights on streets impacted by development.
- h. Construct, contribute, or dedicate land for the provision of off-site bicycle trails linking the facility to designated bicycle commuting routes.

Commercial Uses

- i. Provide preferential parking spaces for carpools and vanpools and provide 7 foot 2 inch minimum vertical clearance in parking facilities for vanpool access.
- j. Implement on-site circulation plans in parking lots to reduce vehicle queuing.
- k. Improve traffic flow at drive-throughs by designing separate windows for different functions and by providing temporary parking for orders not immediately available for pickup.
- l. Set up resident worker training programs to improve job/housing balance.
- m. Require retail facilities or special event centers to offer travel incentives such as discounts on purchases for transit riders.
- n. Establish a shuttle service from residential core areas to the commercial core areas.
- o. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters).
- p. Implement a pricing structure for single-occupancy employee parking and/or provide discounts to ridesharers.
- q. Include residential units within a commercial project.

- r. Utilize parking in excess of code requirements as on-site park-n-ride lots or contribute to construction of off-site lots.
- s. Any two of the following:
 - Construct off-site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on-site improvements, such as bicycle paths.
 - Include bicycle parking facilities, such as bicycle lockers and racks.
 - Include showers for bicycling employees' use.
- t. Any two of the following:
 - Construct off-site pedestrian facility improvements, such as overpasses, wider sidewalks.
 - Construct on-site pedestrian facility improvements, such as building access that is physically separated from street and parking lot traffic and walk paths.
 - Include showers for pedestrian employees' use.
- u. Provide shuttles from the commercial core areas to major transit stations.
- v. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.).
- w. Charge visitors to park at specialty commercial/entertainment developments.
- x. Synchronize traffic lights on streets impacted by development.
- y. Reschedule truck deliveries and pickups to off-peak hours.
- z. Set up paid parking systems where drivers pay at walkup kiosk and exit via a stamped ticket to reduce emissions from queuing vehicles.
- aa. Require on-site truck loading zones.
- ab. Implement or contribute to public outreach programs.

ac. Require employers not subject to Regulation XV (now Rule 2202) to provide commuter information area.

Stationary Source Operational Emissions

Residential

ad. Use solar or low emission water heaters.

ae. Use central water heating systems.

af. Use built-in energy-efficient appliances.

ag. Provide shade trees to reduce building heating/cooling needs.

ah. Use energy-efficient and automated controls for air conditioners.

ai. Use double-paned windows.

aj. Use energy-efficient low-sodium parking lot lights.

ak. Use lighting controls and energy-efficient lighting.

al. Orient buildings to the north for natural cooling and include passive solar design (e.g., daylighting).

am. Use light-colored roofing materials to reflect heat.

an. Increase walls and attic insulation beyond Title 24 requirements.

Commercial Uses

ao. Use solar or low emission water heaters.

ap. Use central water heating systems.

aq. Provide shade trees to reduce building heating/cooling needs.

ar. Use energy-efficient and automated controls for air conditioners.

as. Use double-paned windows.

at. Use energy-efficient low-sodium parking lot lights.

au. Use lighting controls and energy-efficient lighting.

av. Use light-colored roofing materials to reflect heat.

aw. Increase walls and attic insulation beyond Title 24 requirements.

ax. Orient buildings to the north for natural cooling and include passive solar design (e.g., daylighting).

LV4.9-96 The project developer(s) shall coordinate with Santa Clarita Transit to identify appropriate bus stop/turnout locations.

LV4.9-107 Kiosks containing transit information shall be constructed by the project applicant adjacent to selected future bus stops prior to initiation of bus service to the site.

(c) Area Source Operational Emissions

LV4.9-118 Wood-burning fireplaces and stoves shall be prohibited in all residential units. Use of wood in fireplaces shall be prohibited through project Covenants, Conditions, and Restrictions.

d. Emission Reduction Efficiencies for Operational Emissions

Ranges of emission reduction efficiencies for the above-recommended mitigation measures for operational emissions are identified in Table 11-6 of the SCAQMD's *CEQA Air Quality Handbook*.¹³⁸ The SCAQMD recommends that the low end of the range should be used when selecting the efficiencies for various projects unless otherwise justified.¹³⁹ Not all of the recommended measures would measurably reduce all measured operational-related pollutant levels to less than significant, but their implementation would reduce summertime CO emissions by 10.19.7 percent, VOC emissions by 22.415.5 percent, NO_x emissions

¹³⁸ No emissions reduction efficiencies are provided for SO_x emissions; however, SO_x emissions of the proposed project would be less than significant.

¹³⁹ SCAQMD, *CEQA Air Quality Handbook* (Diamond Bar, California: SCAQMD, November 1993).

**Table 4.9-28
Operational Emissions Reductions**

Emissions Source	Emissions in Pounds per Day				
	CO	VOC	NO _x	SO _x ¹	PM ₁₀
Summertime Emissions					
Total Project Emissions	<u>2,044.68</u> 4,104.14	<u>282.36</u> 418.92	<u>248.68</u> 414.66	<u>2,632.52</u>	<u>427.37</u> 372.02
Reduction in Area Source Emissions	<u>-24,347.74</u>	<u>-47.47</u> 37.07	<u>-14.37</u>	--	<u>-0.07</u>
Reduction in Mobile Source Emissions	<u>-183.56</u> 390.74	<u>-15.12</u> 28.00	<u>-20.09</u>	--	<u>-39.34</u>
Total Reduced Emissions	<u>1,836.78</u> 3,705.66	<u>216.63</u> 353.85	<u>214.22</u>	--	<u>387.12</u> ²
Percent Reduction	<u>10.179.7%</u>	<u>22.42</u> 15.5%	<u>13.86%</u>	--	<u>9.24%</u>
Recommended Threshold:	550.0	55.0	55.0	<u>150.0</u> —	150.0
Exceeds Threshold?	YES	YES	YES	<u>NO</u> —	YES
Wintertime Emissions					
Total Project Emissions	<u>1,946.73</u> 5,741.55	<u>293.65</u> 2,023.47	<u>301.47</u> 605.22	<u>2,224.89</u>	<u>428.04</u> 616.4
Reduction in Area Source Emissions	<u>-9,415.31</u>	<u>-45.13</u> 36.79	<u>-18.79</u> 12.57	--	<u>-0.31</u> <u>0.02</u>
Reduction from No Wood Burning Fire Places/Stoves	<u>-1,784.09</u>	<u>-1,617.41</u>	<u>-18.37</u>	--	<u>-244.38</u>
Reduction in Mobile Source Emissions	<u>-178.13</u> 378.07	<u>-16.57</u> 27.25	<u>-24.12</u> 53.67	--	<u>-39.34</u> <u>35.65</u>
Total Reduced Emissions	<u>1,759.20</u> 3,574.08	<u>228.81</u> 342.02	<u>258.56</u> 520.61	--	<u>387.55</u> ³ 336.35
Percent Reduction	<u>9.6337.8%</u>	<u>21.24</u> 83.1%	<u>14.23</u> 14.0%	--	<u>9.2845.4%</u>
Recommended Threshold:	550.0	55.0	55.0	<u>150.0</u> —	150.0
Exceeds Threshold?	YES	YES	YES	NO	YES
<p>Source: Impact Sciences, Inc. Emission reduction calculations are provided in Recirculated Draft EIR Appendix 4.9. Emission reduction calculations in Recirculated Draft EIR Appendix 4.9 do not reflect point source emissions, so the totals in the appendix are lower than those shown above.</p> <p>Totals in table may not appear to add exactly due to rounding in the computer model calculations.</p> <p>¹ SCAQMD does not provide emission reductions for SO_x.</p> <p>² Includes 75.72 pounds of PM_{2.5} total reduced emissions, which exceed the 55 pound threshold. Individual component source emission reductions are presented in Final EIR Appendix F4.9.</p> <p>³ Includes 76.15 pounds of PM_{2.5} total reduced emissions, which exceed the 55 pound threshold. Individual component source emission reductions are presented in Final EIR Appendix F4.9.</p>					

by 13.912.0 percent, and PM₁₀ emissions, including PM_{2.5} emissions, by 9.26 percent. The measures would reduce wintertime CO emissions by 9.637.8 percent, VOC emissions by 21.283.1 percent, NO_x emissions by 14.20 percent, and PM₁₀ emissions, including PM_{2.5} emissions, by 9.345.4 percent. ~~The wintertime~~

~~emissions would be significantly reduced with the mitigation measure that no wood burning fireplaces or stoves be permitted in the residences.~~ Even with these emissions reductions, project operational air quality impacts would remain significant as shown in **Table 4.9-28, Operational Emissions Reductions** (please see Estimated Emissions Reductions Efficiencies spreadsheets in Recirculated Draft EIR **Appendix 4.9** for detailed calculations).

9. CUMULATIVE AIR QUALITY IMPACTS

The assessment of whether or not the project shows a 1 percent per year reduction in project emissions of CO, VOC, NO_x, SO_x, and PM₁₀, including PM_{2.5}, differs from the cumulative impacts analysis methodology used in other sections of this EIR in which all foreseeable future development within a given service boundary or geographical area is predicted and its impacts measured. However, this SCAQMD assessment method is consistent with the SCAQMD's overall goal to reduce emissions within the Basin in order to meet the standards set in the 2007~~3~~ AQMP.

As shown previously in **Table 4.9-27**, above, implementation of the recommended mitigation measures would reduce summertime CO emissions by 10.197 percent, VOC emissions by 22.4155 percent, NO_x emissions by 13.9424 percent, and PM₁₀ emissions, including PM_{2.5} emissions, by 9.26 percent. The measures would reduce wintertime CO emissions by 9.6378 percent, VOC emissions by 21.2834 percent, NO_x emissions by 14.29 percent, and PM₁₀ emissions, including PM_{2.5} emissions, by 9.3454 percent. Since these represent emission reductions on a daily basis, they would be reduced by at least the lower summertime percentages on an annual basis, thereby exceeding the SCAQMD's performance standard for annual emissions reductions. The *CEQA Air Quality Handbook* does not identify any reduction efficiencies for emissions of SO_x. It should be assumed, however, that these measures would reduce emissions of SO_x by a minimum of 1 percent given that the minimum reduction for other mobile emissions is 9.6 percent. Therefore, the project would meet the annual emission reduction target of 1 percent and would not be considered cumulatively significant pursuant to the SCAQMD's recommended approach.

Additionally, the project is within growth forecasts contained in the 2004~~1~~ RTP, which forms the basis for future air emissions forecasts in the 2007~~3~~ AQMP. Although this method is not included in the *CEQA Air Quality Handbook* as a way to assess cumulative air quality impacts, this determination indicates that the project would be consistent with the 2007~~3~~ AQMP; thus, it would not jeopardize attainment of state and federal ambient air quality standards in the Basin.

Even though the project shows at least a 1 percent per year reduction in project emissions of CO, VOC, NO_x, and PM₁₀, including PM_{2.5}, and likely a similar reduction in SO_x ~~and PM_{2.5}~~ emissions, and even though the project is consistent with 2007~~3~~ AQMP, as a conservative and "worst-case" approach, the project does increase emissions in an air basin, which is in nonattainment for O₃ (VOC and NO_x as O₃

precursors), and PM₁₀, including PM_{2.5}. Therefore, the project is considered to result in significant adverse cumulative air quality impacts.

10. CUMULATIVE MITIGATION MEASURES

All known required mitigation measures, as discussed above, have been incorporated into this air quality impact analysis to further reduce and control project-specific emissions. These measures also will help reduce the project's cumulative significant air quality impacts.

11. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project-Specific Impacts

Although the recommended mitigation measures, if feasible, would reduce the magnitude of construction and operational emissions to some extent, no feasible mitigation exists that would reduce all of these emissions to below the SCAQMD's recommended thresholds of significance. The project's construction-related emissions of CO, VOC, NO_x, and PM₁₀, including PM_{2.5}, and operation-related emissions of CO, VOC, ~~and NO_x~~, and PM₁₀, including PM_{2.5}, are considered significant and unavoidable.¹⁴⁰

LST impacts suggest that PM₁₀ emissions could exceed the limitations in SCAQMD Rule 403. While the NO₂ concentrations exceed the LST thresholds, the CAAQS would be exceeded only if (1) the actual background concentrations were as high as those on which the LST thresholds are based during the worst-case construction day; (2) the amount of construction activity (e.g., number and types of equipment, hours of operation) assumed in this analysis actually occurred; and (3) the meteorological conditions in the data set used in the dispersion modeling analysis occurred in the vicinity of the project site on the worst-case construction day.

While the project's air emissions would be unavoidably significant, it is important to note that the project is located in close proximity to job centers, and shopping and recreational amenities, thus reducing the number of VMT to these locations. Furthermore, the site is in close proximity to local transit facilities, contains land for a park and ride lot, and is within 7 miles of a Metrolink station, which links the valley to many parts of Southern California. Consequently, because VMT would be reduced, air emissions would be reduced as well. The project is also consistent with the 2007~~3~~ AQMP; therefore, based on SCAQMD methods of analysis, project emissions should not jeopardize the long-term attainment of state and federal ambient air quality standards in the Santa Clarita Valley and the region.

¹⁴⁰ The RDEIR identified CO construction emissions and PM₁₀ operation-related emissions as significant and unavoidable. See Tables 4.9-27 and 4.9-28, respectively. The omission of CO and PM₁₀ from the listing of emissions in this text was an inadvertent error.

b. Cumulative Impacts

The project's mitigated operational-related CO, VOC, ~~and~~ NO_x and PM₁₀, including PM_{2.5}, emissions exceed the SCAQMD's recommended daily emission thresholds of significance for these pollutants¹⁴¹; however, based upon the SCAQMD's methods of determining whether or not the project shows a 1 percent per year reduction in project emissions of CO, VOC, NO_x, SO_x, and PM₁₀, including PM_{2.5}, the project would not contribute significant cumulative impacts. Nonetheless, as a conservative and "worst-case" approach, and because the Basin is already in nonattainment for O₃ (VOC and NO_x as O₃ precursors), and PM₁₀, including PM_{2.5}, any increases in these emissions by the project that exceed the emissions thresholds are considered significant and unavoidable air quality impacts.

¹⁴¹ The RDEIR identified the project's mitigated operational-related PM₁₀ emissions as exceeding SCAQMD thresholds. See Table 4.9-28. The omission of PM₁₀ from the listing of emissions in this text was an inadvertent error.

4.10 WATER SERVICE

Since the release of the Landmark Village Recirculated Draft EIR, portions of **Section 4.10, Water Service** have been updated, as reflected below in double-underline and strikeout text. The reader should also note that two important documents used in preparation of this section of the EIR have been updated. In June 2011, the Castaic Lake Water Agency (CLWA) and the retail water purveyors adopted the 2010 Urban Water Management Plan (2010 UWMP). The retail water purveyors prepared and released the 2010 Santa Clarita Valley Water Report (2010 Water Report), also in June 2011.

Information presented in the 2010 UWMP and 2010 Water Report supports the conclusion in the Landmark Village Recirculated Draft EIR that an adequate and sustainable supply of local and imported water is available to meet all future water supply needs of the Santa Clarita Valley, including the Landmark Village project, without creating significant environmental impacts. The 2010 UWMP and 2010 Water Report are presented in the Landmark Village Final EIR, **Appendix F4.10**. Summaries of both the 2010 UWMP and the 2010 Water Report are presented in the Final EIR in **New Topical Response 15: 2010 Urban Water Management Plan** and **New Topical Response 16: 2010 Santa Clarita Valley Water Report**.

In addition, also since the release of the Recirculated Draft EIR, August 2010 ammonium perchlorate was detected in Valencia Water Company (VWC) Well 201. A summary of the pertinent events surrounding this topic is presented in the Final EIR in **Updated Topical Response 1: Perchlorate Treatment Update**. That topical response also addresses the perchlorate-related comments received on the Landmark Village Recirculated Draft EIR, and provides an update on the progress made to date in implementing the remediation and treatment of perchlorate in the Santa Clarita Valley's groundwater supplies.

1. SUMMARY

The proposed Landmark Village project would generate a total water demand of 972 acre-feet per year (afy),¹ 608 afy of potable water demand, and 364 afy of non-potable demand. Potable water demand (608 afy) would be met by the Valencia Water Company through the use of the project applicant's rights to 7,038 afy of groundwater from the Alluvial aquifer, which is presently used by the applicant for agricultural irrigation. Because this water is already used to support the applicant's existing agricultural uses, there is not expected to be any significant environmental effects resulting from the use of such water to meet the potable demands of the Landmark Village project, which is

¹ An acre-foot represents 43,560 cubic feet, or 325,850 gallons, of water. An acre-foot of water has been generally defined as "an irrigation-based measurement equaling the quantity of water required to cover an acre of land to a depth of one foot." See, *Brydon v. East Bay Mun. Utility Dist.* (1994) 24 Cal.App.4th 178, 182, fn. 1.

part of the approved Newhall Ranch Specific Plan area. In addition, due to project conditions, the amount of groundwater that will be used to meet the potable demands of the Newhall Ranch Specific Plan, including the Landmark Village project, cannot exceed the amount of water historically and presently used by the applicant for agricultural uses. Therefore, no net increase in groundwater use will occur with implementation of this project pursuant to the Specific Plan.

Non-potable water demand (364 afy) would be met through the use of recycled (reclaimed) water from the initial phase of the Newhall Ranch Water Reclamation Plant (WRP), with build-out of the WRP occurring over time as demand for treatment increases with implementation of the Newhall Ranch Specific Plan. Alternatively, if the Newhall Ranch WRP is not operating at the time of project occupancy, the non-potable water demand would be met through the use of recycled water from the existing Valencia WRP, located upstream of the Landmark Village project site.

Accordingly, the proposed project's water demand would be met by relying on two primary sources of water supply, namely, the applicant's agricultural water supplies and recycled water supplied by the Newhall Ranch WRP or the existing Valencia WRP. Because these two independent water sources meet the water needs of the proposed project, no potable water would be needed from the existing or planned water supplies of Castaic Lake Water Agency (CLWA), including imported water from CLWA's State Water Project (SWP) supplies. Nonetheless, CLWA's water supplies, including imported water from the SWP, and other non-SWP imported supplies, are assessed in this EIR for information purposes.

Based on the information presented, an adequate supply of water is available to serve the Landmark Village project, and the project will not contribute to any significant cumulative water supply impacts in the Santa Clarita Valley, because it would rely on local groundwater and recycled water from local water reclamation plants and not use or rely on CLWA's SWP supplies. No significant water supply or water quality impacts are expected from supplying available water to meet the demands of the Landmark Village project. No significant cumulative water supply impacts are expected to result from supplying water to the Landmark Village project, because it would not use or rely on CLWA's SWP supplies.

Over the past several years, questions have been raised regarding the reliability of SWP water delivered by CLWA, the ability of local water purveyors to deliver an adequate and reliable supply of water to its customers, and the extent to which ammonium perchlorate discovered in local groundwater reduces the amount of local water available in the Santa Clarita Valley. Provided below are answers to these questions, in non-technical terms.

a. Where does the Landmark Village water come from (what are the supply sources)?

The project area lies within the groundwater basin identified in DWR Bulletin 118 (2003 Update) as the Santa Clara River Valley Groundwater Basin, East Subbasin (Basin) (See Recirculated Draft EIR **Appendix 4.10**). The Basin is comprised of two aquifer systems, the Alluvium and the Saugus Formation. The Alluvium (also referred to as the Alluvial aquifer) generally underlies the Santa Clara River and its several tributaries, and the Saugus Formation underlies practically the entire Upper Santa Clara River area.

As discussed above, the projected total water demand for the Landmark Village project is 972 afy in a normal/average year. Project water demand increases by approximately 10 percent in a dry year² to a total of 1,069 afy. To meet this demand, Valencia Water Company, as the local retail purveyor, would provide water to the Landmark Village project. Water sources expected to serve the Landmark Village project are the applicant's agricultural water from the Alluvial aquifer to meet the project's potable demand, and recycled water from the Newhall Ranch WRP (or the existing Valencia WRP) to meet the project's non-potable demand. These local supplies are readily available from the local groundwater basin, and from existing and approved water reclamation plants (either the existing Valencia WRP or the approved Newhall Ranch WRP).

² In a single dry year, people are still in their "normal" or wet year water usage pattern from the prior year. In that dry year, however, they see dryer lawns, etc., and increase water usage to compensate (i.e., resulting in a 10 percent increase in water usage).

b. How reliable are the water supply sources for Landmark Village?

The Alluvial aquifer can meet the groundwater demands of the proposed Landmark Village project under both short- and long-term conditions without creating any significant groundwater impacts. The groundwater component of the overall water supply in the Santa Clarita Valley derives from a groundwater operating plan developed by CLWA and the local retail purveyors over the past 20 years to meet water requirements (municipal, agricultural, small domestic), while maintaining the Basin in a sustainable condition (i.e., no long-term depletion of groundwater or interrelated surface water). This operating plan also addresses groundwater contamination issues in the Basin. The operating plan is based on the concept that pumping can vary from year-to-year to allow increased groundwater use in dry periods and increased recharge during wet periods, and to collectively assure that the Basin is adequately replenished through various wet/dry cycles. The operating yield for the Basin has been quantified as ranges of annual pumping volumes. The groundwater operating plan is further described below. The operating plan addresses both the Alluvial aquifer and the Saugus Formation.

Groundwater supplies were evaluated in the 2005 UWMP, the 2005 *Basin Yield Report*, and the more recently issued 2009 report entitled, *Analysis of Groundwater Supplies and Groundwater Basin Yield Upper Santa Clara River Groundwater Basin, East Subbasin (2009 Basin Yield Update)*. This evaluation resulted in the following findings: (a) both the Alluvial aquifer and the Saugus Formation are reasonable and sustainable sources of local water supplies at the yields stated in the 2005 UWMP over the next 25 years; (b) the yields are not overstated and will not deplete or “dry-up” the groundwater basin; and (c) there is no need to reduce the yields for purposes of planning, as shown in both the 2005 UWMP, the 2005 *Basin Yield Report*, and the 2009 *Basin Yield Update* (see Recirculated Draft EIR **Appendix 4.10**, for the 2005 UWMP, the 2005 *Basin Yield Report* and the 2009 *Basin Yield Update*). In addition, the 2005 UWMP, 2005 *Basin Yield Report*, and the 2009 *Basin Yield Update* determined that neither the Alluvial aquifer nor the Saugus Formation is in an overdraft condition, or projected to become overdrafted.

Alluvium – The applicant would meet all of the Landmark Village project's water demands by using its groundwater produced from the Alluvial aquifer in Los Angeles County (County), which is presently committed to agricultural uses. The amount of water historically and presently available from this source is approximately 7,038 afy. The project's potable water demand is estimated to be 608 afy. The water from the Alluvial aquifer presently used for agriculture would be used to meet all of the project's potable water needs resulting in no net increase in groundwater use.

As stated in the ~~2009~~ *Santa Clarita Valley Water Report, April 2009–May 2010 (2009* ~~Water Report)~~, and the 2005 *Urban Water Management Plan (2005 UWMP; see Recirculated Draft EIR **Appendix 4.10**)*, the operating plan for the Alluvial aquifer involves pumping from the Alluvial aquifer in a given year, based

on local hydrologic conditions in the eastern Santa Clara River watershed. Pumping ranges between 30,000 and 40,000 afy during normal/average and above-normal rainfall years. However, due to hydrogeologic constraints in the eastern part of the Basin, pumping is reduced to between 30,000 and 35,000 afy during locally dry years.

Saugus Formation – The Saugus Formation is not identified as a source of supply for the Newhall Ranch Specific Plan, including the Landmark Village project. However, the operating plan for Saugus pumping is presented as additional information regarding the groundwater basin.

As stated in the ~~2008 Water Report~~ 2009 Water Report, the 2009 Basin Yield Update and the 2005 UWMP, pumping from the Saugus Formation in a given year is tied directly to the availability of other water supplies, particularly from the SWP. During average year conditions within the SWP system, Saugus pumping ranges between 7,500 and 15,000 afy. Planned dry-year pumping from the Saugus Formation ranges between 15,000 and 25,000 afy during a dry year and can increase to between 21,000 and 25,000 afy if SWP deliveries are reduced for two consecutive dry years and between 21,000 and 35,000 afy if SWP deliveries are reduced for three consecutive dry years. Such pumping would be followed by periods of reduced (average-year) pumping, at rates between 7,500 and 15,000 afy, to further enhance the effectiveness of natural recharge processes that would recover water levels and groundwater storage volumes after the higher pumping during dry years.

c. Does Landmark Village rely on State Water Project supplies?

No. As indicated above, Landmark Village will use local groundwater and recycled water from local water reclamation plants. Because these two independent water sources (i.e., groundwater and recycled water) meet the potable and non-potable water demands of the proposed Landmark Village project, no potable water would be used or relied upon from CLWA's SWP supplies. Because the Landmark Village project relies only upon local groundwater and recycled water to meet its potable and non-potable water demands, it does not contribute any significant cumulative water impacts in the Santa Clarita Valley. Nonetheless, for information purposes, this EIR summarizes CLWA's SWP and non-SWP imported supplies available to the Santa Clarita Valley as a whole.

For the other portions of the Santa Clarita Valley that rely, at least in part, on SWP supplies, the reliability of that water varies depending upon several factors. The amount of water the Department of Water Resources (DWR) determines is available and allocates for delivery in a given year is based on that year's hydrologic conditions, the amount of water in storage in the SWP system, regulatory, environmental, operational constraints, levee vulnerability due to flooding and earthquakes, the SWP Contractors' requests for SWP supplies, and other factors. These factors can significantly alter and reduce the availability of SWP water in any given year.

concentrations to be below (better than) the Basin Plan groundwater objectives. The Basin Plan includes groundwater quality objectives for various constituents. These objectives are designed to protect groundwater for municipal drinking water purposes. As to the potential affect that water disinfection would have on the quality of water found in the Santa Clara River and local groundwater supplies, Valencia Water Company disinfects its groundwater supply with calcium hypochlorite (65 percent available chlorine) to an average dosage of not more than 0.5 mg/L. Valencia indicates that the use of calcium hypochlorite to disinfect groundwater would slightly increase the level of chloride found in groundwater and would still be far below the secondary maximum contaminant level (MCL) for chloride of 250 mg/L. Methyl-Tertiary Butyl Ether (MTBE) has been a concern for the past several years, and on May 17, 2000, DPH adopted a primary MCL for MTBE of 0.013 mg/L. CLWA and the local water purveyors have been testing for MTBE since 1997 and, to date, have not detected it in any of the production wells.

Total Dissolved Solids (TDS) are a measure of the dissolved cations and anions, primarily inorganic salts (calcium, magnesium, potassium, sodium, chlorides, and sulfates). High TDS levels can impair agricultural, municipal supply, and groundwater recharge beneficial uses. Results from laboratory testing conducted for the Valencia Water Company wells show that TDS levels range from 890 to 900 milligrams per liter (mg/l), which meets all water quality standards for drinking water, including the secondary standards for TDS. Please see **Section 4.3, Water Quality**, of this EIR for further information on TDS standards.

e. What is the likelihood of perchlorate contamination of the Landmark Village water sources?

In 1997, the State of California conducted tests on a number of municipal water wells owned by Santa Clarita Water Division of Castaic Lake Water Agency (SCWD), Newhall County Water District (NCWD) and Valencia Water Company (VWC) located in the vicinity of the former Whittaker Bermite site. Valencia Water Company investigated the future risk of perchlorate contamination on its new wells. In summary, the approach used to investigate the potential capture of perchlorate-impacted groundwater by the new wells involved three sequential steps: identification of local and regional groundwater flow patterns in the Alluvium; application of a single layer groundwater flow model to examine the capture zone of the four-well “well field” under planned operating conditions; and interpretation of potential capture of perchlorate via examination of the well’s theoretical independent capture zone relative to the known occurrence of perchlorate in the Alluvium. The latter step was subsequently augmented by considering other factors, such as the locations and magnitude of pumping between the new wells and the known occurrence of perchlorate, which affect the potential capture of perchlorate by the new wells. Given that the groundwater resources from the Alluvial aquifer for the Landmark Village project would be produced from wells located along Castaic Creek and over 4 miles west of the area known to be perchlorate-contaminated (i.e., the former Whittaker-Bermite facility), the groundwater supplies for this

potential significant impacts, Los Angeles County adopted 22 water-related mitigation measures.⁷ Based on the environmental analysis and record, the Board of Supervisors found that adoption of the mitigation measures would reduce potentially significant water-related impacts to less than significant levels.

3. EXISTING CONDITIONS

Water supply and demand in the Santa Clarita Valley is affected by existing conditions, including local climatic conditions, demographics in the region, existing topography and regional area geology and hydrology, surface water flows, effects of drought cycles both locally and regionally, and effects of urbanization in the Valley. These existing conditions are thoroughly addressed in Section 2.5 of the Newhall Ranch Revised Additional Analysis, Volume VIII (May 2003). In addition, these local conditions are evaluated in several documents listed below. This list also identifies the documents that were used or relied upon in the preparation of this section.

The documents, some of which are referenced appendices, are incorporated by reference and available for public inspection and review upon request at CLWA (wholesale water agency) ~~22722 Soledad~~ 27234 Bouquet Canyon Road, Santa Clarita, California 91350, or the Valencia Water Company (local retail water supplier), 24631 Avenue Rockefeller, Valencia, California 91355. The documents referred to throughout this section were used in formulating an independent determination of the sufficiency of the identified water supplies to meet the proposed demands of the proposed Project and other related cumulative development.

- *2005 Urban Water Management Plan*, prepared for Castaic Lake Water Agency, CLWA Santa Clarita Water Division, Newhall County Water District, Valencia Water Company, Los Angeles County Waterworks District No. 36, prepared by Black & Veatch, Nancy Clemm, Kennedy Jenks Consultants, Jeff Lambert, Luhdorff & Scalmanini, Richard Slade and Associates, November 2005 (2005 UWMP).
- *Data Document, Proposed 2008 Facility Capacity Fees*, Castaic Lake Water Agency, November 12, 2008 (2008 Data Document).
- *Analysis of Groundwater Basin Yield, Upper Santa Clara River Groundwater Basin, East Subbasin, Los Angeles County, California*, prepared by CH2M HILL, in cooperation with Luhdorff & Scalmanini, in support of the August 2001 Memorandum of Understanding between the Upper Basin Water Purveyors and the United Water Conservation District August 2005 (2005 Basin Yield Report).

⁷ See, Mitigation Measures 4.11-1 through 4.11-22 in the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003).

- *Analysis of Groundwater Supplies and Groundwater Basin Yield, Upper Santa Clara River Groundwater Basin, East Subbasin*, by Luhdorff & Scalmanini and GSI Water Solutions, Inc., August 2009 (2009 Basin Yield Update).
- *Santa Clarita Valley Water Report 2006*, prepared for CLWA, Los Angeles County Waterworks District No. 36, Santa Clarita Water Division, Newhall County Water District and Valencia Water Company by Luhdorff and Scalmanini, Consulting Engineers, May 2007 (SCVWR, 2007).
- *Santa Clarita Valley Water Report 2007*, prepared for CLWA, Los Angeles County Waterworks District No. 36, Santa Clarita Water Division, Newhall County Water District and Valencia Water Company by Luhdorff and Scalmanini, Consulting Engineers, April 2008 (SCVWR, 2008).
- *Santa Clarita Valley Water Report 2008*, prepared for CLWA, Los Angeles County Waterworks District No. 36, Santa Clarita Water Division, Newhall County Water District and Valencia Water Company by Luhdorff and Scalmanini, Consulting Engineers, April 2009 (SCVWR, 2009).
- *2009 Santa Clarita Valley Water Report*, prepared for CLWA, Los Angeles County Waterworks District No. 36, Santa Clarita Water Division, Newhall County Water District and Valencia Water Company by Luhdorff and Scalmanini, Consulting Engineers, May 2010. (SCVWR, 2010).
- *The Santa Clarita Valley 2007 Consumer Confidence Report*, prepared by CLWA, CLWA's Santa Clarita Water Division, Newhall County Water District, and Valencia Water Company, 2007.
- *The Santa Clarita Valley 2008 Water Quality Report*, prepared by CLWA, CLWA's Santa Clarita Water Division, Newhall County Water District, and Valencia Water Company, 2008.
- *The Santa Clarita Valley 2009 Water Quality Report*, prepared by CLWA, CLWA's Santa Clarita Water Division, Newhall County Water District, and Valencia Water Company, 2009.
- *The Santa Clarita Valley 2010 Water Quality Report*, prepared by CLWA, CLWA's Santa Clarita Water Division, Newhall County Water District, and Valencia Water Company, 2010.
- *2001 Update Report: Hydrogeologic Conditions in the Alluvial and Saugus Formation Aquifer Systems*, prepared for Santa Clarita Valley Water Purveyors by Richard C. Slade and Associates, LLC, July 2002 (Slade, 2002).
- *CLWA Capital Improvement Program* prepared by Kennedy/Jenks Consultants, 2003.
- *CLWA FY 2009/10 Budget, Capital Improvement Program, Fiscal Year 2009/10, Castaic Lake Water Agency, Adopted June 2008 and effective July 2009.*
- *Water Supply Reliability Plan Draft Report* prepared for CLWA by Kennedy/Jenks Consultants, September 2003.
- *Memorandum of Understanding* between Castaic Lake Water Agency and Newhall County Water District, September 2005.
- *Memorandum of Understanding* between the Santa Clara River Valley Upper Basin Water Purveyors and United Water Conservation District, August 2001 (MOU, 2001).

- *Groundwater Management Plan - Santa Clara River Valley Groundwater Basin, East Subbasin*, prepared for CLWA by Luhdorff & Scalmanini Consulting Engineers, December 2003.
- *Regional Groundwater Flow Model for the Santa Clarita Valley: Model Development and Calibration*, prepared for Upper Basin Water Purveyors (CLWA, CLWA Santa Clarita Water Division, Newhall County Water District and Valencia Water Company) by CH2M HILL, April 2004.
- *Analysis of Perchlorate Containment in Groundwater Near the Whittaker-Bermite Property, Santa Clarita, California*, prepared for Upper Basin Water Purveyors in support of the Department of Health Services 97-005 Permit Application by CH2M HILL, December 2004.
- *Analysis of Near-Term Groundwater Capture Areas for Production Wells Located Near the Whittaker-Bermite Property (Santa Clarita, California)*, prepared for Upper Basin Water Purveyors in support of the amended 2000 UWMP by CH2M HILL, December 21, 2004.
- *Water Supply Contract Between the State of California Department of Water Resources and CLWA, 1963* (plus amendments, including the "Monterey Amendment," 1995, and Amendment No. 18, 1999, the transfer of 41,000 acre-feet of SWP supplies from Kern County Water Agency to CLWA).
- *2002 Semitropic Groundwater Storage Program and Point of Delivery Agreement* among the Department of Water Resources of the State of California, CLWA, and Kern County Water Agency.
- *2002 Draft Recycled Water Master Plan* prepared for CLWA by Kennedy/Jenks Consultants.
- *Draft Program Environmental Impact Report - Recycled Water Master Plan*, prepared for CLWA by Bon Terra Consulting, November 2006 (SCH No. 2005041138).
- *Final Program Environmental Impact Report - Recycled Water Master Plan*, prepared for CLWA by Bon Terra Consulting, March 2007 (SCH No. 2005041138).
- ~~*2002 and 2003 Semitropic Groundwater Storage Programs* prepared for CLWA by Kennedy/Jenks Consultants.~~
- *Draft Environmental Impact Report – Supplemental Water Project Transfer of 41,000 acre-feet of State Water Project Table A Amount*, prepared for CLWA by Science Applications International Corporation, June 2004 (SCH No. 1998041127).
- *Final Environmental Impact Report – Supplemental Water Project Transfer of 41,000 acre-feet of State Water Project Table A Amount*, prepared for CLWA by Science Applications International Corporation, December 2004 (SCH No. 1998041127).
- *Draft Environmental Impact Report - Rosedale-Rio Bravo Water Storage District (RRBWSD) Water Banking and Exchange Program*, prepared for CLWA by Science Applications International Corporation, August 2005 (SCH No. 2005061157).
- *Final Environmental Impact Report - Rosedale-Rio Bravo Water Storage District (RRBWSD) Water Banking and Exchange Program*, prepared for CLWA by Science Applications International Corporation, October 2005 (SCH No. 2005061157).
- *Draft Environmental Impact Report - Castaic Lake Water Agency Water Acquisition from the Buena Vista Water Storage District and Rosedale-Rio Bravo Water Storage District Water Banking and Recovery*

Program, prepared for CLWA by Science Applications International Corporation, June 2006 (SCH No. 2006021003).

- *Final Environmental Impact Report - Castaic Lake Water Agency Water Acquisition from the Buena Vista Water Storage District and Rosedale-Rio Bravo Water Storage District Water Banking and Recovery Program*, prepared for CLWA by Science Applications International Corporation, October 2006 (SCH No. 2006021003).
- California Environmental Protection Agency, State Water Resources Control Board, Draft Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem, July 20, 2010.
- California Department of Water Resources, *California's Groundwater*, Bulletin 118, Santa Clara River Valley Groundwater Basin, Santa Clara River Valley East Subbasin, February, 2004.
- California Department of Water Resources, *Groundwater Basins in California*, Bulletin 118-80, January 1980. (DWR Bulletin 118-80, 1980).
- California Department of Water Resources, *The State Water Project Delivery Reliability Report, 2002*, May 2003. (2002 DWR Delivery Reliability Report, May 2003).
- California Department of Water Resources, *The State Water Project Delivery Reliability Report, 2005*, Final, April 2006. (2005 DWR Delivery Reliability Report, April 2006).
- California Department of Water Resources, Bulletin 132-06, Management of the California State Water Project (December 2007).
- California Department of Water Resources, *The State Water Project Delivery Reliability Report, 2007*, August 2008. (2007 DWR Delivery Reliability Report, August 2008).
- California Department of Water Resources, *Draft State Water Project Delivery Reliability Report, 2009*, December 2009. (2009 DWR Delivery Reliability Report).
- California Department of Water Resources, *California's Drought* and associated publications, <http://www.water.ca.gov/drought> (accessed, December 8, 2008).
- California Department of Water Resources, *Using Future Climate Projections to Support Water Resources Decision Making in California*, <http://www.energy.ca.gov/2009publications/CEC-500-2009-052/CEC-500-2009-052-D.PDF> (accessed, January 27, 2009).
- *2008 Water Master Plan, Draft*, (Santa Clarita Water Division of the Castaic Lake Water Agency), Civiltec Engineering, Inc., May 19, 2008.
- CLWA Letter to Los Angeles County Department of Regional Planning, February 2008.
- *Additional CEQA Findings Regarding the Newhall Ranch Final Additional Analysis to the Partially Certified Final EIR for the Newhall Ranch Specific Plan and Water Reclamation Plant*. March 2003. (Los Angeles County 2003).
- *Mitigated Negative Declaration – Groundwater Containment, Treatment and Restoration Project*, prepared by Kennedy/Jenks Consultants for Castaic Lake Water Agency, September 2005.
- *Interim Remedial Action Plan*, to facilitate and restore pumping of groundwater from two Saugus Formation production wells impacted by perchlorate, prepared by Kennedy/Jenks Consultants for

Adequate planning for, and the procurement of, a reliable water supply is a fundamental function of the CLWA and the local retail purveyors. CLWA obtains its water supply for wholesale purposes principally from the SWP and has a water supply contract with DWR for 95,200 af of SWP Table A Amount. (As discussed below, CLWA maintains other non-SWP imported supplies, including water from Buena Vista-Rosedale [11,000 afy] and Yuba County Water Agency water transfer [850 af in critically dry years].)

"Table A" is a term used in SWP water supply contracts. The "Table A Amount" is the ~~annual~~-maximum amount of water to which a SWP Contractor has a contract right to request delivery each year of the highest priority available under the SWP Contractor's water supply contract, and is specified in Table A of ~~each SWP Contractor's water supply~~ the contract. The Table A Amount is not equivalent to actual deliveries of water in any given year, and the water actually available for delivery in any given year may be an amount *less* than the SWP Contractor's Table A Amount, depending upon hydrologic conditions, the amount of water in storage, the operational constraints, requirements imposed by regulatory agencies to meet environmental water needs, the amount of water requested by other SWP Contractors, climatic conditions, and other factors.

As stated, CLWA has an annual SWP Table A Amount of ~~95,000~~-95,200 af through its water supply contract with DWR. This Table A Amount is a maximum and does not reflect the actual amount of water available to CLWA from the SWP, which varies from year to year as described above.

As background, CLWA's original SWP water supply contract with DWR was amended in 1966 for a maximum annual Table A Amount of 41,500 af. In 1991, CLWA purchased an additional 12,700 af of annual Table A Amount from the Devil's Den Water District in a Kern County water district. In March 1999, CLWA purchased another 41,000 af of annual Table A Amount from the Wheeler Ridge-Maricopa Water Storage District by way of an amendment to its water supply contract. The amended water supply contract between CLWA and DWR is found in Recirculated Draft EIR **Appendix 4.10** and discussed in detail in Topical Responses 4 and 5 of the Landmark Village Final EIR (November 2007).⁹

⁹ CLWA prepared an EIR to address the environmental consequences of the 1999 41,000 af transfer. The EIR for the 41,000 af transfer was the subject of litigation in Los Angeles County Superior Court (*Friends of the Santa Clara River v. Castaic Lake Water Agency* (Los Angeles County Superior Court, Case No. BS056954). CLWA prevailed in the litigation at the trial court; however, the project opponent (Friends of the Santa Clara River) filed an appeal. In January 2002, the Court of Appeal issued a decision ordering the trial court to decertify the EIR for the 41,000 af transfer agreement on the grounds that it had tiered from another EIR that had been subsequently decertified in other litigation. In doing so, however, the Court of Appeal also examined all of the petitioner's other arguments, found them to be without merit, and held that, if the tiering problem had not arisen, it would have affirmed the earlier trial court judgment upholding the EIR. (See, Appendix 4.10 [*Friends of the Santa Clara River v. Castaic Lake Water Agency* (2002) 95 Cal.App.4th 1373, 1387].)

The Court of Appeal did not invalidate any portion of the completed 41,000 af transfer agreement. Instead, the Court of Appeal directed the trial court to vacate certification of the EIR, and to retain jurisdiction until CLWA corrected the tiering technicality by preparing a new EIR. (See, **Appendix 4.10** [*Friends of the Santa Clara River*, 95 Cal.App.4th at p. 1388].)

In October 2002, the Los Angeles County Superior Court refused to prohibit CLWA from using the 41,000 af of Table A water while a new EIR was being prepared. (See, **Appendix 4.10** [Judgment Granting Peremptory Writ of Mandate, *Friends of the Santa Clara River v. Castaic Lake Water Agency*, Case No. BS056954, filed October 25, 2002].) The trial court decision on remand was appealed by Friends of the Santa Clara River in January 2003. On December 1, 2003, the appellate court denied any relief to Friends and affirmed the trial court's ruling. (See, **Appendix 4.10** [Appellate court decision, *Friends of the Santa Clara River v. Castaic Lake Water Agency*, Court of Appeal, Second Appellate District, Division Four, Appellate No. B164027].)

CLWA's revised EIR was subsequently certified by the CLWA Board of Directors on December 23, 2004. On January 24, 2005, separate lawsuits challenging the EIR for this same project were filed by California Water Impact Network and Planning and Conservation League in the Ventura County Superior Court. These cases were consolidated and transferred to Los Angeles County Superior Court. On May 22, 2007, after a hearing, the trial court issued a final Statement of Decision, which included a determination that the 41,000 afy transfer is valid and cannot be terminated or unwound. The trial court, however, also found one defect in the 2004 EIR and ordered CLWA to correct the defect and report back to the court. The defect did not relate to the environmental conclusions reached in the 2004 EIR; rather, CLWA is required to better establish the basis for selecting three alternative scenarios covered in the 2004 EIR. As a result, the trial court entered Judgment against CLWA and another writ of mandate issued directing CLWA set aside its certification of the 2004 EIR. (See, **Appendix 4.10** [Statement of Decision, *California Water Network v. Castaic Lake Water Agency*, Los Angeles County Superior Court No. BS098724, filed April 2, 2007 ("Chalfant Decision.")]). The writ, however, specifically stated that it did not call for CLWA to set aside the 41,000 afy transfer. In July 2007, the petitioners appealed the trial court's decision and judgment, and cross-appeals were filed by CLWA and other parties. This appeal was resolved in favor of CLWA on December 17, 2009. Please refer to this EIR, **Subsection 5.c.**, Imported Water Supplies, (2) Litigation Effects on Availability of Imported Water, (b) Litigation Concerning CEQA Review of the 41,000 af Transfer, for information concerning the outcome of the appellate court litigation concerning the 41,000 afy transfer.

In early 2007, CLWA finalized a Water Acquisition Agreement with the Buena Vista Water Storage District (Buena Vista) and the Rosedale-Rio Bravo Water Storage District (Rosedale-Rio Bravo) in Kern County. Under this Program, Buena Vista's high flow Kern River entitlements (and other acquired waters that may become available) are captured and recharged within Rosedale-Rio Bravo's service area on an ongoing basis. CLWA will receive 11,000 af of these supplies annually either through an exchange of Buena Vista's and Rosedale-Rio Bravo's SWP supplies or through direct delivery of water to the California Aqueduct *via* the Cross Valley Canal.¹⁰

Additional non-SWP imported water supply also is available to CLWA in critically dry years as a result of DWR entering into agreements with the Yuba County Water Agency (YCWA) and the Bureau of Reclamation (Reclamation) related to settlement of water rights issues on the Lower Yuba River (Yuba Accord). Additional supplies also could be available to CLWA in wetter years. The quantity of water would vary depending upon hydrology and the extent of participation by other SWP contractors. For purposes of analysis, however, and based on CLWA entering into a YCWA water transfer agreement with ~~YCWA~~DWR, CLWA has projected that approximately 850 af of water would be available to CLWA under the Yuba Accord in a critically dry year. (For a summary of the existing and planned water supplies available for the CLWA service area, please refer to **Tables 4.10-11** and **4.10-14**, below.)

¹⁰ In November 2006, a petition for writ of mandate was filed by California Water Impact Network, seeking to set aside CLWA's certification of the EIR for the Water Acquisition Agreement Project with Buena Vista and Rosedale-Rio Bravo. (*California Water Impact Network, et al. v. Castaic Lake Water Agency, et al.*, Los Angeles County Superior Court No. BS106546.) The petition was later amended to add Friends of the Santa Clara River (Friends) as a petitioner. In November 2007, the trial court filed its Statement of Decision finding that in certifying the EIR and approving the project, CLWA proceeded in a manner required by law, and that its actions were supported by substantial evidence. Judgment was entered in favor of CLWA in December 2007. Petitioners filed a notice of appeal on January 31, 2008. On April 20, 2009, the appellate court ruled in CLWA's favor and this water purchase is now considered final and it remains appropriate to list the 11,000 afy as one of CLWA's permanent water supply sources. (Please refer to the Recirculated Draft EIR, **Appendix 4.10**, for the recent appellate court decision in *California Water Impact Network, Inc. v. Castaic Lake Water Agency*, Second Appellate District, Division Five, Appellate Case No. B205622.)

CLWA Santa Clarita Water Division (SCWD) service area includes portions of the City of Santa Clarita and unincorporated portions of Los Angeles County in the communities of Canyon Country, Newhall, and Saugus. SCWD supplies water from local groundwater and CLWA imported water.

The Valencia Water Company service area includes a portion of the City of Santa Clarita and unincorporated portions of Los Angeles County in the communities of Castaic, Stevenson Ranch, and Valencia. Valencia Water Company supplies water from local groundwater, CLWA imported water, and recycled water. Valencia is a public water utility regulated by the California Public Utilities Commission (PUC), and its service area currently includes portions of the Newhall Ranch Specific Plan site, including the Landmark Village project site. As a result, Valencia is the retail water purveyor for the Landmark Village project. **Figure 4.10-2, Valencia Water Company Service Area**, illustrates the CLWA and Valencia Water Company service area, which includes portions of the Newhall Ranch Specific Plan site and the Landmark Village project site.

As of 2009~~8~~, the retail water purveyors served approximately 69,700~~400~~ connections in the Santa Clarita Valley. The specific breakdown by purveyor is provided in **Table 4.10-1, Retail Water Service Connections**.

**Table 4.10-1
Retail Water Service Connections**

Retail Water Purveyor	Connections
CLWA Santa Clarita Water Division (SCWD)	28,700 500
Los Angeles County Waterworks District #36	1,400
Newhall County Water District (NCWD)	9,650 500
Valencia Water Company	30,000
Total	69,700400

Source: 2009~~8~~ Santa Clarita Valley Water Report, ~~April 2009~~ May 2010 (see Recirculated Draft EIR **Appendix 4.10**).

5. SANTA CLARITA VALLEY WATER SUPPLIES – HISTORIC AND EXISTING USES

The Newhall Ranch Revised Additional Analysis, Section 2.5, Volume VIII (May 2003), provides important water demand and supply information for the Santa Clarita Valley, including the Newhall Ranch Specific Plan and the Landmark Village project site. The ~~2008 Water Report~~2009 Water Report and 2005 UWMP (see, Recirculated Draft EIR **Appendix 4.10**) also contain useful local and regional water demand, supply, and reliability planning information, particularly in the context of the perchlorate contamination detected in municipal-supply wells in the local Basin. In addition, the 2005 *Basin Yield Report* and 2009 *Basin Yield Update* confirm that the CLWA/purveyor groundwater operating plan for the local groundwater basin in Santa Clarita Valley will not cause detrimental short or long-term effects to the groundwater and surface water resources in the valley and, therefore, the local groundwater basin is sustainable. Valencia Water Company's Revised Landmark WSA for the proposed Landmark Village project also provides useful information to the County of Los Angeles for its consideration in making a determination on whether there are sufficient water supplies available to serve the Landmark Village project, in addition to existing and planned future uses in the Santa Clarita Valley (see Recirculated Draft EIR **Appendix 4.10** [Revised Landmark WSA]). Valencia Water Company prepared the Revised Landmark WSA for the Landmark Village project, because it is the purveyor that will provide water service to the proposed project.

a. Description of Groundwater Supplies

This section focuses on the available local groundwater supplies in the Santa Clarita Valley, including a summary of both the adopted Groundwater Management Plan for the local Basin and the 2009 *Basin Yield Update*.

(1) *The Upper Santa Clara River Hydrologic Area*

The Upper Santa Clara River Hydrologic Area, as defined by DWR, is located almost entirely in northwestern Los Angeles County. The area, as shown in **Figure 4.10-2a, Santa Clara Valley East Groundwater Basin – East Subbasin**, encompasses about 654 square miles comprised of flat valley land (about 6 percent of the total area) and hills and mountains (about 94 percent of the total area) that border the Valley area. The mountains include the Santa Susana and San Gabriel Mountains to the south and the Sierra Pelona and Leibre-Sawmill Mountains to the north. Elevations range from about 800 feet on the Valley floor to about 6,500 feet in the San Gabriel Mountains. The headwaters of the Santa Clara River are at an elevation of about 3,200 feet at the divide separating this hydrologic area from the Mojave Desert.

The Santa Clara River and its tributaries flow intermittently from Lang Station westward about 35 miles to Blue Cut, just west of the Los Angeles County/Ventura County line, where ~~it forms the~~ the River is the outlet ~~for~~ from the Upper Santa Clara River Hydrologic Area. The principal tributaries of the Santa Clara River in the Santa Clarita Valley are Castaic Creek, San Francisquito Creek, Bouquet Creek, and the South Fork of the Santa Clara River. In addition to tributary inflow, ~~the Santa Clarita Valley,~~ the Santa Clara River receives treated wastewater discharge from the existing Saugus and Valencia Water Reclamation Plants (WRPs), which are operated by the Santa Clarita Valley Sanitation District ~~County Sanitation Districts of Los Angeles County.~~

The Santa Clara River Valley East Groundwater Subbasin, beneath the Santa Clarita Valley in the Upper Santa Clara River Hydrologic Area (**Figure 4.10-3**), is the source of essentially all local groundwater used for water supply in the Santa Clarita Valley. Below Blue Cut, the Santa Clara River continues westward through Ventura County to its mouth near Oxnard. Along that route, the River traverses all or parts of six groundwater basins in Ventura County (Piru, Fillmore, Santa Paula, Oxnard Forebay, Oxnard Plain, and Mound). ~~Ventura County is not a part of the Upper Santa Clara River HA.~~

There are two primary precipitation gages in the Santa Clarita Valley, the Newhall-Soledad 32c gage and the NCWD gage. The National Climatic Data Center (NCDC) and Los Angeles County Department of Public Works (LACDPW) have maintained records for the Newhall-Soledad 32c gage since 1931. The NCWD has maintained records for the NCWD gage since 1979. The cumulative records from these two gages correlate very closely, with the NCWD gage recording approximately 25 percent more precipitation than the Newhall-Soledad 32c gage. This is likely due to the location of the NCWD gage, which is at the base of the mountains rimming the southern edge of the Santa Clarita Valley.

The Santa Clarita Valley is characterized as having an arid climate. Historically, intermittent periods of below-average precipitation have typically been followed by periods of above-average precipitation in a cyclical pattern, with each wetter or drier period typically lasting from one to five years. The longer-term precipitation records for the Newhall-Soledad 32c gage are illustrated in 2009 Water Report Figure 1-3. Long-term average precipitation at that gage is 17.9 inches (1931-2009). 2009 Water Report Figure 1-3 also shows the cumulative departure from mean annual precipitation. In general, periods of below-average precipitation have been longer and more moderate than 1-5 periods of above-average precipitation. Recently, the periods from 1971 to 1976, 1984 to 1991 and 1999 to 2003 have been drier than average; the periods from 1977 to 1983 and 1992 to 1996 have been wetter than average. More recently, wet conditions that began in late 2004, continued into early 2005, ultimately resulting in about 37 inches of measured precipitation, or slightly more than 200 percent of long-term average precipitation, in that year. Those significantly wet conditions contributed to substantial groundwater recharge and decreased water demand that year. Subsequently, total precipitation in 2006 and 2007 was slightly to significantly lower, 14 inches and 6 inches respectively, but water requirements in both years were still close to those projected in the 2005 UWMP, and there were no dramatic changes in groundwater conditions. With the exception of the average annual rainfall total in 2008, the dry conditions that began in 2006 have persisted through 2009. 2009 was a below-average year, with 11.6 inches of precipitation. However, water demand in 2009 was below that projected for average conditions in the 2005 UWMP, and below the short-term projection in the 2008 Water Report. Early year precipitation in 2010 was approximately 13.4 inches through April, or close to long-term average for that part of the year, but water use further decreased from last year for the same period. Combined with other water supply considerations, discussed in 2009 Water Report Chapter 4, those conditions are expected to result in 2010 water requirements being slightly lower than water use in 2009.

~~The Santa Clarita Valley is characterized as having an arid climate. Historically, intermittent periods of less than average precipitation have typically been followed by periods of greater than average precipitation in a cyclical pattern, with each wetter or drier period typically lasting from one to five years. The long term average precipitation is 18.1 inches (1931 2006). In general, periods of less than average precipitation have been longer and more moderate than periods of greater than average precipitation. Recently, the periods from 1971 to 1976, 1984 to 1991, and 1999 to 2003 have been drier than average; the periods from 1977 to 1983 and 1992 to 1996 have been wetter than average. Wet conditions that began in late 2004 continued into early 2005. Significant storm events in January 2005 produced over 13 inches of measured precipitation, or more than 70 percent of average annual precipitation in the first month of the year. Significant storm events continued in February 2006, resulting in nearly 17 inches of additional measured precipitation, or nearly 100 percent of average annual precipitation in February alone. In total, 2005 had about 37 inches of measured precipitation, or slightly more than 200 percent of long term average precipitation. Those significantly wet conditions contributed to substantial groundwater recharge and decreased water demand that year. In contrast, total~~

~~precipitation in 2006 and 2007 was slightly less than 14 inches and 6 inches resulting in water requirements that can be described as “normal” (as projected in the 2005 UWMP) and no dramatic changes in groundwater conditions, as described in the 2008 Santa Clara Valley Water Report. 2008 was an average year, with 17.9 inches of precipitation. demand in 2008 was below that estimated for average conditions in the 2005 UWMP, and below the short term projection in the 2007 Water Report. Early year precipitation in 2009 has been approximately 5.8 inches, or about 50 percent of the normal January through March period.~~

Combined with other water supply considerations, discussed in Chapter 4 of the 2009 Water Report, those conditions were expected to result in 2009 water requirements being comparable to water use in 2008.

(2) Santa Clara River Valley Groundwater Basin - East Subbasin

As stated, the project area lies within the groundwater basin identified in DWR Bulletin 118 (2003 Update) as the Santa Clara River Valley Groundwater Basin, East Subbasin (Basin). The Basin is comprised of two aquifer systems, the Alluvium and the Saugus Formation. The Alluvium (also referred to as the Alluvial aquifer) generally underlies the Santa Clara River and its several tributaries, and the Saugus Formation underlies practically the entire Upper Santa Clara River area. There are also some scattered outcrops of terrace deposits in the Basin that likely contain limited amounts of groundwater. Since these deposits are located in limited areas situated at elevations above the regional water table and are also of limited thickness, they are of no practical significance as aquifers and, consequently, have not been developed for any significant water supply. **Figure 4.10-2, Santa Clara River Valley East Groundwater Basin – East Subbasin**, illustrates the mapped extent of the Santa Clara River Valley East Subbasin, which approximately coincides with the outer extent of the Alluvium and Saugus Formation. The CLWA service area and the location of the two existing water reclamation plants in the Valley also are shown on **Figure 4.10-3**.

(3) Adopted Groundwater Management Plan

In 2001, as part of legislation authorizing CLWA to provide retail water service to individual municipal customers, Assembly Bill (AB) 134 included a requirement that CLWA prepare a groundwater management plan in accordance with the provisions of Water Code Section 10753.

CLWA adopted the Groundwater Management Plan (GWMP) on December 10, 2003.¹² The GWMP contains four management objectives, or goals, for the Basin, including (1) development of an integrated surface water, groundwater and recycled water supply to meet existing and projected demands for municipal, agricultural and other water uses; (2) assessment of Basin conditions to determine a range of operational yield values that use local groundwater conjunctively with supplemental SWP supplies and recycled water to avoid groundwater overdraft; (3) preservation of groundwater quality, and active characterization and resolution of groundwater contamination problems, including perchlorate; and (4) preservation of interrelated surface water resources, which includes managing groundwater in a manner that does not adversely impact surface and groundwater discharges or quality to downstream basins.

Prior to preparation and adoption of the GWMP, a local Memorandum of Understanding (MOU) process among CLWA, the purveyors, and United Water Conservation District (UWCD) in neighboring Ventura County had produced the beginning of local groundwater management, now embodied in the GWMP. In 2001, those agencies prepared and executed the MOU (see Recirculated Draft EIR **Appendix 4.10** [MOU]). The MOU is a collaborative and integrated approach to several of the aspects of water resource management included in the GWMP. UWCD manages surface water and groundwater resources in seven groundwater basins, all located in Ventura County, downstream of the Basin. As a result of the MOU, the cooperating agencies have undertaken the following measures: (1) Integrated their database management efforts; (2) Developed and utilized a numerical groundwater flow model for analysis of groundwater basin yield and containment of groundwater contamination; and (3) Continued to monitor and report on the status of Basin conditions, as well as on geologic and hydrologic aspects of the overall stream-aquifer system.

¹² CLWA's Groundwater Management Plan, adopted December 10, 2003, is found in **Appendix 4.10** of this EIR.

Simulation of the 2008 Operating Plan with pumping redistribution indicates that westerly redistribution of 1,600 afy of Alluvial pumping from the eastern end of the basin would help, but not eliminate, the lack of achievability. The residual unachievable pumping in the east end of the basin, about 4,500 afy, could be redistributed to other areas of the basin with minimal impact on groundwater levels. In this case, total Alluvial pumping in the basin could remain near the upper end of the 2008 Operating Plan range of 30,000 to 35,000 afy. Conversely, absent any additional efforts to redistribute pumping, the total Alluvial pumping capacity during extended dry periods would likely fall toward the lower end of the 2008 Operating Plan range (toward 30,000 afy). The 2009 Basin Yield Update also assessed the runoff conservation/groundwater recharge projects planned by the Los Angeles County Flood Control District, and determined that the projects are unlikely to provide any substantial recharge that does not already occur in the basin. Additionally, the 2009 Basin Yield Update concluded that these proposed projects are mostly located in areas of the basin where the Alluvial aquifer is of insufficient thickness and storage (and, thus is not developed for water supply), or where the Alluvial aquifer already fully recharges when stream flows are naturally present.

The 2009 Basin Yield Update also assessed potential impacts of climate change on the yield of the basin and the related groundwater supply from the basin. While future conditions cannot be projected with any degree of certainty, the results of simulating basin response to the 2008 Operating Plan, under a range of potential climate change trends give rise to two observations:

- For the broad range of climate change possibilities that was analyzed, the 2008 Operating Plan would appear to be both sustainable and, with the same physical constraints to full pumping in the eastern part of the basin as have otherwise been experienced, achievable through the shorter term horizon associated with UWMP planning.
- The range of potential climate change impacts extends from a possible wet trend to a possible dry trend over the long term. The trends that range from an approximate continuation of historical average precipitation, to something wetter than that, would appear to result in continued sustainability of the 2008 Operating Plan, again with intermittent constraints on full pumping in the eastern part of the basin. The potential long-term dry trend arising out of climate change would be expected to decrease local recharge to the point that lower and declining groundwater levels would render the 2008 Operating Plan unsustainable.

(5) *Available Groundwater Supplies*

Groundwater Operating Plan – Based on the ~~2008 Water Report~~ 2009 Water Report (April 2009) ~~May 2010~~, the groundwater component of overall water supply in the Santa Clarita Valley derives from a groundwater operating plan developed by CLWA and the local retail purveyors over the past 20 years to meet water requirements (municipal, agricultural, small domestic), while maintaining the Basin in a sustainable condition (i.e., no long-term depletion of groundwater or interrelated surface water). This

operating plan also addresses groundwater contamination issues in the Basin, all consistent with both the GWMP and the MOU described above. This operating plan is based on the concept that pumping can vary from year-to-year to allow increased groundwater use in dry periods and increased recharge during wet periods, and to collectively assure that the Basin is adequately replenished through various wet/dry cycles. As described in the GWMP and the MOU, the operating yield concept has been quantified as ranges of annual pumping volumes.

The on-going work of the MOU has produced two important reports. The first report, dated April 2004, documents the development and calibration of the groundwater flow model for the Santa Clarita Valley.¹⁵ The second report, dated August 2005, presents the modeling analysis of the CLWA/retail water purveyor groundwater operating plan for the valley, and concludes that the plan will not cause detrimental short or long-term effects to the groundwater and surface water resources in the valley and, therefore, the plan is a reliable, sustainable component of water supply for the valley.¹⁶ The analysis of sustainability for groundwater and interrelated surface water is described further in Appendix C to the 2005 UWMP (see, Recirculated Draft EIR **Appendix 4.10**).

The groundwater operating plan, summarized in **Table 4.10-2, Groundwater Operating Plan for the Santa Clarita Valley**, is further described below. The operating plan addresses both the Alluvium and Saugus Formation.

**Table 4.10-2
Groundwater Operating Plan for the Santa Clarita Valley**

Aquifer	Groundwater Production (af)			
	Normal Years	Dry Year 1	Dry Year 2	Dry Year 3
Alluvium	30,000 to 40,000	30,000 to 35,000	30,000 to 35,000	30,000 to 35,000
Saugus	7,500 to 15,000	15,000 to 25,000	21,000 to 25,000	21,000 to 35,000
Total	37,500 to 55,000	45,000 to 60,000	51,000 to 60,000	51,000 to 70,000

Source: 2005 UWMP, ~~2008 Water Report~~ 2009 Water Report (April 2009-May 2010), and 2009 Basin Yield Update. See Recirculated Draft EIR **Appendix 4.10** for copies of these reports.

¹⁵ See, *Regional Groundwater Flow Model for the Santa Clarita Valley: Model Development and Calibration*, prepared for the Upper Basin Water Purveyors by CH2MHill, April 2004. This report was updated by CH2MHill in a report entitled, *Calibration Update of the Regional Groundwater Flow Model for the Santa Clarita Valley, Santa Clarita, California*, August 2005. Copies of these two reports are available for public review and inspection in **Appendix 4.10** of this EIR.

¹⁶ See, *Analysis of Groundwater Basin Yield, Upper Santa Clara River Groundwater Basin, East Subbasin, Los Angeles County, California*, prepared by CH2MHill in cooperation with Lohdorff & Scalmanini Consulting Engineers, August 2005. This report is available for public review and inspection in **Appendix 4.10** of this EIR.

Alluvium – As applied to the Newhall Ranch Specific Plan, the applicant would meet all of the Landmark Village project’s water demands by using its groundwater produced from the Alluvial aquifer in Los Angeles County, which is presently committed to agricultural uses. The amount of water historically and presently available from this source is approximately 7,038 afy. The project’s potable water demand is estimated to be 608 afy. The water from the Alluvial aquifer presently used for agriculture would be used to meet all of the project’s potable water needs resulting in no net increase in groundwater use.

As stated in the 2005 UWMP, ~~2008 Water Report~~2009 Water Report, and the *2009 Basin Yield Update*, the operating plan for the Alluvial aquifer involves pumping from the Alluvial aquifer in a given year, based on local hydrologic conditions in the eastern Santa Clara River watershed. Pumping ranges between 30,000 and 40,000 afy during normal/average and above-normal rainfall years. However, due to hydrogeologic constraints in the eastern part of the Basin, pumping is reduced to between 30,000 and 35,000 afy ~~during following multiple~~ locally dry years.

Saugus Formation – The Saugus Formation is not identified as a source of supply for the Newhall Ranch Specific Plan, including the Landmark Village project. However, the operating plan for Saugus pumping is presented as additional information regarding the Basin.

As stated in the 2005 UWMP, ~~2008 Water Report~~2009 Water Report, and the *2009 Basin Yield Update*, pumping from the Saugus Formation in a given year is tied directly to the availability of other water supplies, particularly from the SWP. During average year conditions within the SWP system, Saugus pumping ranges between 7,500 and 15,000 afy. Planned dry-year pumping from the Saugus Formation ranges between 15,000 and 25,000 afy during a drought year and can increase to between 21,000 and 25,000 afy if SWP deliveries are reduced for two consecutive years and between 21,000 and 35,000 afy if SWP deliveries are reduced for three consecutive years. Such pumping would be followed by periods of reduced (average-year) pumping, at rates between 7,500 and 15,000 afy, to further enhance the effectiveness of natural recharge processes that would cause groundwater levels and storage volumes to recover ~~water levels and groundwater storage volumes~~ after the higher pumping during dry years. For reference to the groundwater operating plan historical and projected groundwater pumping by retail water purveyor, please refer to **Table 4.10-3, Historical Groundwater Production by the Retail Water Purveyors**, and **Table 4.10-4, Projected Groundwater Production (Normal Year)**.

**Table 4.10-3
Historical Groundwater Production by the Retail Water Purveyors**

Basin Name	Groundwater Pumped (af)¹							
	2002	2003	2004	2005	2006	2007	2008	2009
<u>Santa Clara River Valley East Subbasin</u>								
<u>CLWA Santa Clarita Water Division</u>								
- <u>Alluvium</u>	<u>9,513</u>	<u>6,424</u>	<u>7,146</u>	<u>12,408</u>	<u>13,156</u>	<u>10,686</u>	<u>11,878</u>	<u>10,077</u>
- <u>Saugus Formation</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>LA County Waterworks District #36</u>								
- <u>Alluvium</u>	<u>0</u>	<u>0</u>	<u>380</u>	<u>343</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
- <u>Saugus Formation</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>Newhall County Water District</u>								
- <u>Alluvium</u>	<u>981</u>	<u>1,266</u>	<u>1,582</u>	<u>1,389</u>	<u>2,149</u>	<u>1,806</u>	<u>1,717</u>	<u>1,860</u>
- <u>Saugus Formation</u>	<u>3,395</u>	<u>2,513</u>	<u>3,739</u>	<u>3,435</u>	<u>3,423</u>	<u>3,691</u>	<u>4,195</u>	<u>3,868</u>
<u>Valencia Water Company</u>								
- <u>Alluvium</u>	<u>11,603</u>	<u>11,707</u>	<u>9,862</u>	<u>12,228</u>	<u>11,884</u>	<u>13,140</u>	<u>14,324</u>	<u>12,459</u>
- <u>Saugus Formation</u>	<u>965</u>	<u>1,068</u>	<u>1,962</u>	<u>2,513</u>	<u>2,449</u>	<u>2,367</u>	<u>1,770</u>	<u>2,836</u>
<u>Total</u>	<u>26,457</u>	<u>22,978</u>	<u>24,671</u>	<u>32,316</u>	<u>33,061</u>	<u>31,690</u>	<u>33,884</u>	<u>31,100</u>
- <u>Alluvium</u>	<u>22,097</u>	<u>19,397</u>	<u>18,970</u>	<u>26,368</u>	<u>27,189</u>	<u>25,632</u>	<u>27,919</u>	<u>24,396</u>
- <u>Saugus Formation</u>	<u>4,360</u>	<u>3,581</u>	<u>5,701</u>	<u>5,948</u>	<u>5,872</u>	<u>6,058</u>	<u>5,965</u>	<u>6,704</u>
<u>% of Total Municipal Water Supply</u>	<u>39%</u>	<u>34%</u>	<u>34%</u>	<u>46%</u>	<u>45%</u>	<u>35%</u>	<u>45%</u>	<u>44%</u>

Notes:

¹ Pumping for municipal and industrial uses only. Does not include pumping for agricultural and miscellaneous uses.

Source: 2009 Santa Clarita Valley Water Report, May 2010, Table 2-1 (see Appendix 4.10).

Basin Name	Groundwater Pumped (af)¹							
	2001	2002	2003	2004	2005	2006	2007	2008
<u>Santa Clara River Valley East Subbasin</u>								
<u>CLWA Santa Clarita Water Division</u>								
- <u>Alluvium</u>	<u>9,896</u>	<u>9,513</u>	<u>6,424</u>	<u>7,146</u>	<u>12,408</u>	<u>13,156</u>	<u>10,686</u>	<u>11,878</u>
- <u>Saugus Formation</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>LA County Waterworks District #36</u>								
- <u>Alluvium</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>380</u>	<u>343</u>	<u>0</u>	<u>0</u>	<u>0</u>
- <u>Saugus Formation</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>Newhall County Water District</u>								
- <u>Alluvium</u>	<u>1,641</u>	<u>981</u>	<u>1,266</u>	<u>1,582</u>	<u>1,389</u>	<u>2,149</u>	<u>1,806</u>	<u>1,717</u>
- <u>Saugus Formation</u>	<u>2,432</u>	<u>3,395</u>	<u>2,513</u>	<u>3,739</u>	<u>3,435</u>	<u>3,423</u>	<u>3,691</u>	<u>4,195</u>

Basin Name	Groundwater Pumped (af) ¹							
	2001	2002	2003	2004	2005	2006	2007	2008
Valencia Water Company								
—Alluvium	10,518	11,603	11,707	9,862	12,228	11,884	13,140	14,324
—Saugus Formation	835	965	1,068	1,962	2,513	2,449	2,367	1,770
Total	25,322	26,457	22,978	24,671	32,316	33,061	31,690	33,884
—Alluvium	22,055	22,097	19,397	18,970	26,368	27,189	25,632	27,919
—Saugus Formation	3,267	4,360	3,581	5,701	5,948	5,872	6,058	5,965
% of Total Municipal Water Supply	42%	39%	34%	34%	46%	45%	35%	45%

Notes:

¹—Pumping for municipal and industrial uses only. Does not include pumping for agricultural and miscellaneous uses.

Source: 2008 Santa Clarita Valley Water Report, April 2009, Table 2-1 (see Recirculated Draft EIR **Appendix 4.10**).

Three factors affect the availability of groundwater supplies under the groundwater operating plan. They are: (1) sufficient source capacity (wells and pumps); (2) sustainability of the groundwater resource to meet pumping demand on a renewable basis; and (3) protection of groundwater sources (wells) from known contamination, or provisions for treatment in the event of contamination. All three factors are discussed below, and are addressed in further detail in Chapter 5 and Appendices C and D to the 2005 UWMP (see Recirculated Draft EIR **Appendix 4.10** [2005 UWMP]).

**Table 4.10-4
Projected Groundwater Production (Normal Year)**

Basin Name	Range of Groundwater Pumping (af) ^{1,2,3}				
	2010	2015	2020	2025	2030
Santa Clara River Valley East Subbasin					
CLWA Santa Clarita Water Division					
- Alluvium	6,000–14,000	6,000–14,000	6,000–14,000	6,000–14,000	6,000–14,000
- Saugus Formation	3,000	3,000	3,000	3,000	3,000
LA County Waterworks District #36					
- Alluvium	0	0	0	0	0
- Saugus Formation	500–1,000	500–1,000	500–1,000	500–1,000	500–1,000
Newhall County Water District					
- Alluvium	1,500–3,000	1,500–3,000	1,500–3,000	1,500–3,000	1,500–3,000
- Saugus Formation	3,000–6,000	3,000–6,000	3,000–6,000	3,000–6,000	3,000–6,000
Valencia Water Company					
- Alluvium	12,000–20,000	12,000–20,000	12,000–20,000	12,000–20,000	12,000–20,000
- Saugus Formation	2,500–5,000	2,500–5,000	2,500–5,000	2,500–5,000	2,500–5,000

Notes:

- ¹ The range of groundwater production capability for each purveyor varies based on a number of factors, including each purveyor's capacity to produce groundwater, the location of its wells within the Alluvium and Saugus Formation, local hydrology, availability of imported water supplies and water demands.
- ² To ensure sustainability, the purveyors have committed that the annual use of groundwater pumped collectively in any given year will not exceed the purveyors' operating plan as described in the 2005 Basin Yield Report and the 2009 Basin Yield Update, and reported annually in the Santa Clarita Valley Water Reports. As noted in the discussion of the purveyors' operating plan for groundwater in Table 3-6 of the 2005 UWMP, the "normal" year quantities of groundwater pumped from the Alluvium and Saugus Formation are 30,000 to 40,000 afy and 7,500 to 15,000 afy, respectively.
- ³ Groundwater pumping shown for purveyor municipal and industrial uses only.

Source: 2005 UWMP (see Recirculated Draft **Appendix 4.10**)

(a) Alluvial Aquifer

Based on a combination of historical operating experience and recent groundwater modeling analysis, the Alluvial aquifer can supply groundwater on a long-term sustainable basis in the overall range of 30,000 to 40,000 afy, with a probable reduction in dry years to a range of 30,000 to 35,000 afy. Both of those ranges include about 15,000 afy of Alluvial pumping for current agricultural water uses and an estimated pumping of up to about 500 afy by small private pumpers. The dry year reduction is a result of practical constraints in the eastern part of the Basin, where lowered groundwater levels in dry periods have the effect of reducing pumping capacities in that shallower portion of the aquifer.

Background. Total pumping from the Alluvium in 2009~~8~~ was about ~~41,750~~39,986 af, an ~~increase~~-decrease of ~~2,950~~1,730 af from the preceding year. Total Alluvium pumping was at the upper end slightly above of the groundwater operating plan range. Of the total Alluvial pumping in 2009~~8~~, about ~~27,950~~24,396 af (61~~7~~7 percent) was for municipal water supply, and the balance, about ~~13,800~~15,590 af (39~~3~~3 percent), was for agriculture and other smaller uses, including individual domestic uses. In a longer-term context, there has been a change in municipal/agricultural pumping distribution since SWP deliveries began in 1980, toward a higher fraction for municipal water supply (from about 50 percent to more than 65 percent of Alluvial pumpage), which reflects the general land use changes in the area. Ultimately, on a long-term average basis since the beginning of imported water deliveries from the SWP, total Alluvial pumping has been about 32,000 afy, which is at the lower end of the range of operational yield of the Alluvium. That average has been higher over the last decade, about ~~38,500~~800 afy, which remains within the range of operational yield of the Alluvium. The overall historic record of Alluvial pumping is illustrated in Figure 3-2 of the ~~2008 Water Report~~2009 Water Report (April 2009May 2010).

Groundwater levels in various parts of the basin historically have exhibited different responses to both pumpage and climatic fluctuations. During the last 20 to 30 years, depending on location, Alluvial groundwater levels have remained nearly constant (generally toward the western end of the basin), or have fluctuated from near the ground surface when the basin is full, to as much as 100 feet lower during intermittent dry periods of reduced recharge (generally toward the eastern end of the basin). For illustration of the various groundwater level conditions in the basin, the Alluvial wells have been grouped into areas with similar groundwater level patterns, as shown in Figure 3-3 of the ~~2008 Water Report~~2009 Water Report (April 2009May 2010). The groundwater level records have been organized into hydrograph form (groundwater elevation vs. time) as illustrated in ~~2008 Water Report~~2009 Water Report (Figures 3-4 and 3-5). Also shown on these plots is an annual marker indicating whether the year had a below average amount of rainfall. The wells shown on these plots are representative of the respective

areas, showing the range of values (highest to lowest elevation) through ~~the~~ each area, and containing a sufficiently long-term record to illustrate trends over time.

Situated along the eastern upstream end of the Santa Clara River channel, the "Mint Canyon" area, located at the far eastern end of the groundwater basin, and the nearby "Above Saugus WRP" areas generally exhibit similar groundwater level responses to hydrologic and pumping conditions. (See ~~2008 Water Report~~ 2009 Water Report [Figure 3-4].) As shown in ~~2008 Water Report~~ 2009 Water Report Figure 3-6, the purveyors decreased total Alluvial pumping from the "Mint Canyon" area steadily from 2000 through 2003, and correspondingly increased pumping in the "Below Saugus WRP," and "Below Valencia WRP" areas. In spite of a continued period of below-average precipitation from 1999 to 2003, that progressive decrease in pumping resulted in a cessation of groundwater level decline in the "Mint Canyon Area." Subsequent wet conditions in late 2004, continuing into 2005, resulted in full recovery of groundwater storage. With such high groundwater levels, pumping in the "Mint Canyon" area was increased in 2005 and 2006, with no significant change in groundwater levels in 2005 and a slight decrease in 2006. Over the last four years, precipitation has been average to below-average. Accordingly, water levels have shown some decline, but this decline has been slowed by the reduction in pumpage in this easternmost part of the basin. Water levels remain within the historic range of levels over similar wet/dry periods. Just below the 'Mint Canyon' area, the 'Above Saugus WRP' has shown a similar decline, despite the steady rate of pumping over the last four years. Here the water levels also remain within the range of historical levels, as expected following a multi-year period without a significant wet year. Partly in response to decreased pumping in "Mint Canyon" and "Above Saugus WRP" areas in 2007 and 2008, groundwater levels slowed their decrease, leveled off, or increased in late 2008 with the onset of seasonal precipitation. These parts of the Valley have historically experienced a number of alternating wet and dry hydrologic conditions (~~2008 Water Report~~ 2009 Water Report Figure 3-4) during which groundwater level declines have been followed by returns to high or mid-range historic levels. This trend has continued over the last four years where below-average hydrologic conditions in 2009 followed three average to below-average years, and groundwater levels remain within mid-range levels. ~~3 years where average hydrologic conditions in 2008 followed two dry years, and groundwater levels remain within mid-range levels.~~

In the 'Bouquet Canyon' area, pumping has remained relatively constant for the last ten years, and water levels have fluctuated with consecutive wet or dry years. During and since the most recent wet conditions of 2004 and 2005, water levels returned to within historic mid-range levels. During 2009, groundwater level trends either leveled off or showed some increase with the onset of precipitation at the end of the year. This groundwater level response to wet/dry years and pumping is typical for this area of the basin and, for 2009, levels have remained within the range of historical levels. When water levels are low, well

~~yields and pumping capacities in this and other eastern areas can be impacted. In the "Bouquet Canyon" area, pumping has remained relatively constant for the last ten years, and water levels have fluctuated with consecutive wet or dry years. During and since the most recent wet conditions of 2004 and 2005, water levels returned to within historic mid range levels. This groundwater level response to wet/dry years and pumping is typical for these areas of the basin. When water levels are low, well yields and pumping capacities in these areas can be impacted. The affected purveyors typically respond by increasing use of Saugus Formation and imported (SWP) supplies, as shown in 2008 Water Report 2009 Water Report Table 2-3. The purveyors also shift a fraction of the Alluvial pumping that would normally be supplied by these eastern areas to areas further west, where well yields and pumping capacities remain fairly constant because of smaller groundwater level fluctuations.~~

In the western parts and lower elevations of the Alluvium, groundwater levels respond to pumping and precipitation in a similar manner, but to an attenuated or limited extent compared to those situated in the eastern, higher elevation ~~of those situated in the eastern, higher elevations~~ areas. As shown in the western group of hydrographs in ~~2008 Water Report~~ 2009 Water Report Figure 3-5, groundwater level fluctuations become more subtle moving westward and lower in the Valley. The "Below Saugus WRP" area, along the Santa Clara River immediately downstream of the Saugus Water Reclamation Plant, and the "San Francisquito Canyon" area generally exhibit similar groundwater level trends. In this middle part of the basin, historical groundwater levels were lower in the 1950's and 60's than current levels. Groundwater levels in this area notably recovered as pumping declined through the 1960's and 1970's. They have subsequently sustained generally high levels for much of the last 30 years, with three dry-period exceptions: mid-1970s, late 1980s to early 1990s, and the late 1990s to early 2000s. Recoveries to previous high groundwater levels followed both of the short dry-period declines in the 1970's and 1990's. More recently, groundwater levels recovered significantly in both areas, to historic highs, following a wetter-than-average year in 2004 and a significantly wet year in 2005. Since 2005, pumping has been increasing in the "Below Saugus WRP" area, while "San Francisquito Canyon" area pumping approximately doubled in 2005, and has since gradually declined and leveled off over the last three years. Despite the current multi-year period of average to below average precipitation, groundwater levels in these two areas remain in mid-range to high historical range. ~~but has since progressively declined. Coupled with the dry 2006-2007 period, water levels had seen varying degrees of decline until they leveled off with the onset of a "near normal" amount of seasonal precipitation in 2008. By the end of 2008, water levels remained in mid-range to high historical range.~~

The "Castaic Valley" area is located along Castaic Creek below Castaic Lake. Below that and along the Santa Clara River, downstream of the existing Valencia Water Reclamation Plant, is the "Below Valencia WRP" area, where discharges of treated effluent from the Valencia WRP to the Santa Clara River

contribute to groundwater recharge. In the "Castaic Valley" area, groundwater levels continue to remain fairly constant, with slight responses to climatic and other fluctuations, since the 1950's (2008 ~~Water Report~~ 2009 Water Report Figure 3-5). Small changes in groundwater levels over the last four years are in ~~2007 and 2008 were~~ consistent with other short-term historical fluctuations. The long-term, generally constant trend remained through 2008. The "Below Valencia WRP" area groundwater levels exhibit slight, if any, response to climatic fluctuations, and have remained fairly constant since the 1950's despite a notable increase in pumping through the 1990s that has since remained relatively steady over the last seven years, through 2009 ~~despite, over the last 20 years, a notable increase in pumping that continued through 2008 in that area~~ (2008 ~~Water Report~~ 2009 Water Report Figure 3-5 and 3-6).

In summary, depending on the period of available data, the history of groundwater levels in the Alluvium shows the same general picture: recent (last 30 years) groundwater levels have exhibited historic highs; in some locations, there are intermittent dry-period declines (resulting from use of some groundwater from storage) followed by wet-period recoveries (and associated refilling of storage space). On a long-term basis, whether over the last ~~28-29~~ years since importation of supplemental SWP water, or over the last 40 to 50 years (since the 1950s - 1960s), the Alluvium shows no chronic trend toward decreasing water levels and storage, and thus shows no symptoms of water level-related overdraft, ~~signs of water level-related overdraft, i.e., no trend toward decreasing water levels and storage.~~ Consequently, pumping from the Alluvium has been and continues to be sustainable, well within the operational yield of that aquifer on a long-term average basis, and also within the operating yield in almost every individual year.

(b) Saugus Formation

Based on historical operating experience and extensive recent testing and groundwater modeling analysis, the Saugus Formation can supply water on a long-term sustainable basis in a normal range of 7,500 to 15,000 afy, with intermittent increases to 25,000 to 35,000 af in dry years. The dry-year increases, based on limited historical observation and modeled projections, demonstrate that a small amount of the large groundwater storage in the Saugus Formation can be pumped over a relatively short (dry) period. This would be followed by recharge (replenishment) of that storage during a subsequent normal-to-wet period when pumping would be reduced.

Background. Total pumping from the Saugus in 2008 was about ~~6,950~~7,700 af, or about 750 af ~~less~~more than in the preceding year. Of the total Saugus pumping in 2009~~8~~, most (about ~~5,950~~6,700 af) was for municipal water supply, and the balance (1,000 af) was for agricultural and other irrigation uses. Historically, groundwater pumping from the Saugus peaked in the early 1990's and then steadily declined through the remainder of that decade. Since then, Saugus pumping had been in the range of about 4,000 to 6,500 afy, with the increase to almost 7,700 af in 2007 and again in 2009. Over the last five years, the municipal use of Saugus water has been relatively unchanged; almost all of the relatively small fluctuations from year to year have been related to non-municipal usage. On a long-term average basis since the importation of SWP water, total pumping from the Saugus Formation has ranged between a low of about 3,700 afy (in 1999) and a high of nearly 15,000 afy (in 1991); average pumping from 1980 to present has been about 6,800 afy. These pumping rates remain well within, and generally at the lower end of, the range of operational yield of the Saugus Formation. The overall historic record of Saugus pumping is illustrated in Figure 3-8 of the ~~2008 Water Report~~2009 Water Report (April 2009~~May~~ 2010).

Unlike the Alluvium, which has an abundance of wells with extensive water level records, the water level data for the Saugus Formation are limited by both the distribution of the wells in that Formation and the periods of water level records. The wells that do have water level records extending back to the mid-1960's indicate that groundwater levels in the Saugus Formation were highest in the mid-1980s and are currently higher than they were in the mid-1960s (~~2008 Water Report~~2009 Water Report Figure 3-9). Based on these data, there is no evidence of any historic or recent trend toward permanent water level or storage decline. There continue to be seasonal fluctuations in groundwater levels but the prevalent longer-term trend is one of general stability.

Consistent with the 2001 Update Report (Slade), the 2005 Basin Yield Report (CH2M Hill and LSCE), the Basin Yield Update, and the 2005 UWMP, the purveyors continue to maintain groundwater storage and associated water levels in the Saugus Formation so that supply is available during drought periods, when Alluvial pumping might be reduced and/or SWP or other supplemental supplies also decreased. The period of increased pumping during the early 1990's is a good example of this management strategy. Most notably, in 1991, when SWP deliveries were substantially reduced, increased pumping from the Saugus made up almost half of the decrease in SWP deliveries. The increased Saugus pumping over several consecutive dry years (1991-1994) resulted in

(c) Impacted Alluvial and Saugus Wells

A small group of wells that have been impacted by perchlorate represent a temporary loss of well capacity within the CLWA service area. Of the six wells that were initially removed from active water supply service upon the detection of perchlorate, three wells remain out of service. However, CLWA and the purveyors have developed an implementation plan that would restore this well capacity. The implementation plan includes a combination of treatment facilities and replacement wells.

In 1997, the State of California conducted tests on a number of municipal water wells owned by Santa Clarita Water Division of Castaic Lake Water Agency (SCWD), Newhall County Water District (NCWD) and Valencia Water Company (VWC) located in the vicinity of the former Whittaker Bermite site. These and subsequent tests found perchlorate in four of the purveyors' deep Saugus Formation aquifer wells: NCWD-11, SCWD Saugus 1, SCWD Saugus 2 and VWC-157 at maximum levels ranging from 14 ppb to 47 ppb depending on the well.¹⁷ These wells were removed from active service and have not been used for drinking water supplies since 1997. In November 2002, perchlorate was found in a shallow Alluvial aquifer groundwater well—SCWD Stadium—at levels up to 5.9 ppb. In April 2005, perchlorate contamination was found in another shallow Alluvial aquifer groundwater well—VWC-Q2. The source of the perchlorate is believed to be from the Whittaker-Bermite site given the proximity of all six impacted wells to the property and the fact that both groundwater and surface water flows from the property to the six wells.

In November, 2000 Castaic Lake Water Agency (CLWA), NCWD, SCWD, and VWC (collectively, "Plaintiffs") filed a complaint against past owner Whittaker and current owners SCLLC and Remediation Financial, Inc., (RFI)(Whittaker, SCLLC and RFI are collectively referred to as "Defendants") in the California Central District Court asserting that hazardous substances (including perchlorate) released from the Whittaker Bermite site contaminated some of Plaintiffs' water production wells. In July 2002, Plaintiffs moved the Court for partial summary judgment that Defendants were liable for response costs under the Comprehensive Environmental Response, Compensation, and Recovery Act (CERCLA). At the same time, Whittaker moved the Court to establish Plaintiffs' liability under CERCLA. In July 2003, the Court granted (in part) Plaintiffs' motion and found that Whittaker and SCLLC were liable for CERCLA response costs and denied Whittaker's motion. *Castaic Lake Water Agency v. Whittaker Corporation*, 272 F.Supp.2d 1053 (2003).

In September 2003, the parties entered into an interim settlement agreement that stayed litigation to allow the parties to, *inter alia*, develop an engineering solution to contain and abate the groundwater contamination and negotiate a final settlement agreement. As a condition for staying litigation activities, Defendants were required to reimburse CLWA for past monitoring and investigation costs and fund the

¹⁷ Perchlorate is a regulated drinking water contaminand in California, with a maximum contaminant level (MCL) of 6 micrograms per liter (µg/l).

although the water is disinfected by the retail purveyors prior to delivery. Existing water quality conditions for urban water uses in the CLWA service area are documented in the Santa Clarita Valley Water Quality Reports. The latest report is the ~~2009-2010~~ Santa Clarita Valley Water Report. This report provides the cumulative results of thousands of water quality tests performed each year in the Santa Clarita Valley on CLWA's and the local purveyors' water supplies.

An annual Consumer Confidence Report (CCR) also is provided to all Santa Clarita Valley residents who receive water from the local retail water purveyors in the CLWA service area. The latest CCR is the 2007 Santa Clarita Valley Consumer Confidence Report. In that report, there is detailed information about the results of the testing of groundwater quality and treated SWP water supplied to the residents of the Santa Clarita Valley. Water quality regulations are constantly changing as contaminants that are typically not found in drinking water are discovered and new standards are adopted. In addition, existing water quality standards are becoming more stringent in terms of allowable levels in drinking water. However, all groundwater produced by the retail water purveyors in the Santa Clarita Valley meets or exceeds stringent drinking water quality regulations set by USEPA, the Department of Public Health (DPH), and the continuing oversight of the California Public Utilities Commission (CPUC).

(2) *Groundwater Quality – Alluvium*

Groundwater quality is, of course, a key factor in assessing the Alluvial aquifer as a municipal and agricultural water supply. Groundwater quality details and long-term conditions, examined by integration of individual records from several wells completed in the same aquifer materials and in close proximity to each other, have been discussed in previous annual Water Reports and in the 2005 UWMP. There were some changes in groundwater quality in 2009 that reflect fluctuations, trends, or other groundwater quality conditions as illustrated in 2009 Water Report Figures 3-11 and 3-12. These graphs show historical specific conductance values for representative wells in the Valley with the California Department of Public Health Secondary Maximum Levels included for reference. Most of the trends show a significant lowering of the specific conductance values by half following the wet years of 2004-2005. Since then, those trends have returned to 2004 levels but do not exceed historical levels. In summary, those conditions include: no long-term overall trend and, most notably, no long-term decline in Alluvial groundwater quality; a general groundwater quality “gradient” from east to west, with lowest dissolved mineral content to the east, increasing in a westerly direction; and periodic fluctuations in some parts of the basin, where groundwater quality has inversely varied with precipitation and stream flow. Those variations are typically characterized by increased mineral concentrations through dry periods of lower stream flow and lower groundwater recharge, such as is currently occurring, followed by lower mineral concentrations through wetter periods of higher stream flow and higher groundwater recharge. The presence of long-term consistent water quality patterns, although intermittently affected by wet and

~~dry cycles, supports the conclusion that the Alluvial aquifer remains a viable ongoing water supply source in terms of groundwater quality. Groundwater quality is a key factor in assessing the Alluvial aquifer as a municipal and agricultural water supply. In terms of the aquifer system, there is no convenient long term record of water quality, (i.e., water quality data in one or more single wells that spans several decades and continues to the present). Thus, in order to examine a long term record of water quality in the Alluvium, individual records have been integrated from several wells completed in the same aquifer materials and in close proximity to each other to examine historical trends in general mineral groundwater quality throughout the basin. Based on these records of groundwater quality, wells within the Alluvium have experienced historical fluctuations in general mineral content, as indicated by electrical conductivity (EC), which correlates with fluctuations of individual constituents that contribute to EC. The historic water quality data indicates that, on a long term basis, there has not been a notable trend and, specifically, there has not been a decline in water quality within the Alluvium.~~

~~Specific conductance within the Alluvium exhibits a westward gradient, corresponding with the direction of groundwater flow in the Alluvium. EC is lowest in the easternmost portion of the Basin, and highest in the west. Water quality in the Alluvium generally exhibits an inverse correlation with precipitation and streamflow, with a stronger correlation in the easternmost portion of the Basin, where groundwater levels fluctuate the most. Wet periods have produced substantial recharge of higher quality (low EC) water, and dry periods have resulted in declines in groundwater levels, with a corresponding increase in EC (and individual contributing constituents) in the deeper parts of the Alluvium.~~

~~Specific conductance throughout the Alluvium is currently below the Secondary (aesthetic) Upper Maximum Contaminant Level of 1600 micromhos per centimeter (umhos/cm). The presence of long term consistent water quality patterns, although intermittently affected by wet and dry cycles, supports the conclusion that the Alluvial aquifer is a viable on-going water supply source in terms of groundwater quality. The analysis of groundwater sustainability was summarized in the 2009 Basin Yield Update. The consultants utilized a regional groundwater flow model, along with a review of historical observations over a 86 year period. The report concluded that the Alluvial and Saugus aquifers historically have been and continue to be in good operating condition and that the water purveyors' groundwater operating plan as described in the 2003 CWMP, 2005 UWMP, the 2008 Santa Clarita Valley Water Report, and the 2009 Basin Yield Update is sustainable and reliable.~~

Perchlorate. The most notable groundwater quality issue in the Alluvium is perchlorate contamination. In 2002, one Alluvial production well owned by SCWD (Stadium Well), located near the former Whittaker-Bermite site, was inactivated for municipal water supply due to detection of perchlorate

slightly below the Notification Level.¹⁸ SCWD has recently drilled a replacement well (Valley Center Well) further to the east, north-northeast of the former Whittaker-Bermite site in a non-impacted portion of the basin. As a result, the Valley Center Well capacity is part of the purveyors' operating plan.

Wells with perchlorate concentrations exceeding the then-applicable Action Level (18 µg/l) or, more recently, the then-applicable Notification Level (6 µg/l)³ were removed from active water supply service.

In early 2005, perchlorate was detected in a second Alluvial production well owned by Valencia Water Company (Well Q2). Valencia Water Company's response was to remove the well from active water supply service and to rapidly seek approval for installation of wellhead treatment and return of the well to service. As part of outlining its plan for treatment and return of the well to service, Valencia Water Company analyzed the impact of the temporary inactivation of the well on its water supply capability; and the analysis determined that Valencia Water Company's other sources are sufficient to meet demand and the inactivation of Well Q2 thus had no impact on Valencia Water Company's water supply capability.¹⁹ Valencia Water Company proceeded through mid-2005 to gain approval for installation of wellhead treatment (ion-exchange as described below), including environmental review, and completed installation of the wellhead treatment facilities in September 2005. Well Q2 was returned to active water supply service with wellhead treatment in October 2005. After nearly two years of operation with wellhead treatment, during which there was no detection of perchlorate, Valencia Water Company was

18 "Notification level" means the concentration level of a contaminant in drinking water delivered for human consumption that the state DPH has determined, based on available specific information, does not pose a significant health risk but warrants notification pursuant to applicable law. Notification levels are non-regulatory, health-based advisory levels established by the state DPH for contaminants in drinking water for which maximum contaminant levels have not been established. Notification levels are established as precautionary measures for contaminants that may be considered candidates for establishment of maximum contaminant levels, but have not yet undergone or completed the regulatory standard setting process prescribed for the development of maximum contaminant levels. Notification levels are not drinking water standards.

19 See, *Impact and Response to Perchlorate Contamination, Valencia Water Company, Well Q2*, prepared for Valencia Water Company by Luhdorff & Scalmanini Consulting Engineers, April 2005. This report is available for public review and inspection in Recirculated Draft EIR **Appendix 4.10**.

authorized by DPH to discontinue wellhead treatment. Since that time, Well Q2 has been operated without wellhead treatment and without detection of perchlorate. As a result, Well Q2's capacity is part of the purveyors' operating plan. The other impacted wells remain out of service; two wells (VWC's Well 157 and SCWD's Stadium Well) have been sealed and replaced by new wells, and two wells (SCWD's Saugus 1 & 2 Wells) are being returned to service as described below.

On-going monitoring of all active municipal wells near the Whittaker-Bermite site has shown no detections of perchlorate in any active Alluvial wells. However, based on a combination of proximity to the Whittaker-Bermite site and prevailing groundwater flow directions, complemented by findings in the on-going on-site and off-site investigations by Whittaker-Bermite and the Army Corps of Engineers (Corps), there is logical concern that perchlorate could impact nearby, down-gradient Alluvial wells (see, 2005 UWMP, Appendix D, in **Appendix 4.10**). As a result, provisions are in place to respond to perchlorate contamination if it should occur. The groundwater model was used to examine capture zones around Alluvial wells under planned operating conditions (pumping capacities and volumes) for the time period through currently scheduled restoration of impacted wells in 2006.²⁰ The capture zone analysis of Alluvial wells generally near the Whittaker-Bermite site, shown on **Figure 4.10-6, Forecasted Two-Year Groundwater Capture Zones for Active Alluvial Production Wells Located Closest to the Whittaker-Bermite Property Santa Clarita, California**, suggests that inflow to those wells (depicted by the color bands) will either be upgradient of the contamination site, or will be from the Alluvium beyond where perchlorate is most likely to be transported, with the possible exception of the Valencia Water Company's Pardee wellfield, which includes Wells N, N7, and N8. Although the capture zone analysis does not show the Pardee wells to be impacted, they are considered to be at some potential risk due to the proximity of their capture zone to the Whittaker-Bermite site.

²⁰ See, Technical Memorandum entitled, *Analysis of Near-Term Groundwater Capture Areas for Production Wells Located Near the Whittaker-Bermite Property (Santa Clarita, California)*, prepared by CH2MHill, for the Santa Clarita Valley Water Purveyors, dated December 21, 2004. This memorandum is available for public review and inspection in **Appendix 4.10** of this EIR.

The combined pumping capacity of Valencia Water Company's Pardee wells is 6,200 gpm, which equates to about 10,000 af of maximum annual capacity. However, in the operating plan for both normal and dry year Alluvial pumping, the planned use of those wells represents 2,940 af of the total 30,000 to 40,000 af Alluvial groundwater supply. Thus, if the wells were to become contaminated with perchlorate, they would represent an amount of the total Alluvial supply that could be readily replaced, on a short-term interim basis, by utilizing an equivalent amount of imported water from CLWA or by utilizing existing capacity from other Alluvial wells (see, **Table 4.10-5**, above). Furthermore, if the Pardee wells were to become contaminated by perchlorate contamination, Valencia Water Company has made site provisions at its Pardee wellfield for installation of wellhead treatment. Such treatment would be the same as once installed at Valencia's Well Q2, and would likely result in the impacted Pardee wells being promptly returned to active service.

In 2009, additional significant progress has been made with respect to perchlorate remediation. For example, in September 2009, CLWA, in partnership with other local retail purveyors and the City of Santa Clarita, completed construction of CLWA's Rio Vista Intake Pump Station, which is CLWA's new perchlorate treatment facility. The facility is designed to restore groundwater production capacity impacted by perchlorate contamination and stop migration of perchlorate from the former Whittaker-Bermite site. Treatment for perchlorate is now in the testing phase and is expected to be fully operational in September 2010. The new plant is expected to be in use beginning January 2010. Through constructed pipelines, perchlorate-impacted water from Saugus Wells 1 and 2 will be pumped and treated at the plant, restoring approximately 3,400 af of groundwater. Pumping and treatment operations are expected to occur on a continuous basis for several years. The new facility will remove perchlorate from the groundwater using ion-exchange technology.

As of August 31, 2009, approximately 23 million gallons of perchlorate-impacted groundwater have been treated and discharged under the NPDES permit authorizing such activities. Routine weekly and monthly NPDES sampling, treatment, and discharge is continuing in compliance with NPDES permit requirements. An additional 12 to 14 wells also are being installed on the Whittaker property to pump and treat contaminated perchlorate on site.

Additional perchlorate-related remediation activities continue to move forward at the former Whittaker-Bermite site. For example, soil remediation operations are continuing on site, including completion of the third draft Remedial Action Plan (RAP) for site-wide soils remediation. The revised draft RAP was submitted to DTSC on August 14, 2009. DTSC's preliminary review comments were incorporated and a revised draft RAP was resubmitted to DTSC on August 31, 2009. Groundwater and surface water issues also continue to be addressed and reported to DTSC. (See Recirculated Draft EIR, **Appendix 4.10** [Progress Letter Report from Hassan Amini, Ph.D., Project Coordinator for AMEC Geomatrix, to DTSC, dated September 15, 2009].)

In short, work continues on multiple tasks to address groundwater contaminated by perchlorate stemming from past manufacturing activities on the former Whittaker-Bermite site. CLWA and the local retail purveyors are proceeding to restore the production capacity of the few remaining groundwater supply wells contaminated by perchlorate, while working on the objectives of containing the downgradient migration of perchlorate. For technical information regarding these up-to-date activities, please refer to the following documents in the Recirculated Draft EIR, **Appendix 4.10**: (a) letter from Hassan Amini, Ph.D., Project Coordinator for AMEC Geomatrix, to DTSC, dated June 8, 2009; (b) CLWA News Release, dated September 14, 2009; (b) Progress Letter Report from Hassan Amini, Ph.D., Project Coordinator for AMEC Geomatrix, to DTSC, dated September 15, 2009; and (c) CLWA Memorandum from Brian J. Folsom to CLWA Board of Directors, dated October 1, 2009.

(3) Groundwater Quality – Saugus Formation

As discussed above for the Alluvium, groundwater quality is a key factor in also assessing the Saugus Formation as a municipal and agricultural water supply. As with groundwater level data, long-term Saugus groundwater quality data are not sufficiently extensive to permit any sort of basin-wide analysis or assessment of pumping-related impacts on quality. However, integration of individual records from several wells has been used to examine general water quality trends. Based on those records, water quality in the Saugus Formation has not historically exhibited the precipitation-related fluctuations seen in the Alluvium. Based on available data over the last 50 years, groundwater quality in the Saugus has exhibited a slight overall increase in dissolved mineral content as illustrated in 2009 Water Report Figure 3-13. More recently, several wells within the Saugus Formation have exhibited an additional increase in dissolved mineral content, similar to short-term changes in the Alluvium, possibly as a result of recharge to the Saugus Formation from the Alluvium. Since 2005, however, these levels have been steadily dropping or remaining constant. Dissolved mineral concentrations in the Saugus Formation remain below the Secondary (aesthetic) Upper Maximum Contaminant Level. Groundwater quality within the Saugus will continue to be monitored to ensure that degradation to the long-term viability of the Saugus as a component of overall water supply does not occur. Similar to the Alluvium, groundwater quality in the Saugus Formation is a key factor in assessing that aquifer as a municipal and agricultural water supply. As with groundwater level data, long term Saugus groundwater quality data is not sufficiently extensive (few wells) to permit any basin wide analysis or assessment of pumping related impacts on quality. As with the Alluvium, EC has been chosen as an indicator of overall water quality, and records have been combined to produce a long term depiction of water quality. Water quality in the Saugus Formation has not historically exhibited the precipitation related fluctuations seen in the Alluvium. Based on the historical record over the last 50 years, groundwater quality in the Saugus has exhibited a slight overall increase in EC. More recently, several wells within the Saugus Formation have exhibited an

~~additional increase in EC similar to that seen in the Alluvium. In 2004, monthly data collected by Valencia Water Company for two Saugus wells shows that the overall level of EC remained fairly stable during the year. Levels of EC in the Saugus Formation remain below the Secondary (aesthetic) Upper Maximum Contaminant Level for EC. Groundwater quality within the Saugus will continue to be monitored to ensure that degradation that presents concern relative to the long term viability of the Saugus as a municipal water supply does not occur.~~

Perchlorate. As with the Alluvium, the most notable groundwater quality issue in the Saugus Formation is perchlorate contamination. Under oversight by the California Department of Toxic Substances Control (DTSC), and with ultimate approval by DPH, in accordance with its Policy 97-005 (for restoration of water supply from "severely impaired" water sources), the purveyors have developed a remedial strategy that entails pumping of two impacted wells for containment of perchlorate migration; treatment, and subsequent use of the pumped water for water supply; and installation of replacement wells in non-impacted portions of the basin to restore the remainder of groundwater supply impacted by perchlorate. A noteworthy detail of these activities is that the groundwater flow model was used to identify the design of a pumping scheme that would meet the purveyors' objectives for perchlorate containment in the Saugus Formation (see Recirculated Draft EIR **Appendix 4.10** [2009 Basin Yield Update, p. III-7]).

The final containment plan specifies that wells SCWD-Saugus 1 and SCWD-Saugus 2 operate at an instantaneous pumping rate of 1,200 gallons per minute (gpm) at each well (for a combined total of 2,400 gpm from the two wells). The annual pumping volume of 1,772 afy per well is based on this rate and also on the assumption that pumping will occur continuously, except for up to four weeks per year for maintenance purposes. Construction of facilities and pipelines necessary to implement the containment program and to restore inactivated well capacity was completed and in, to be followed by operational start-up, ~~are currently scheduled to occur by or before June 2010~~ at the time of this writing.

Under the direction of DTSC, Whittaker has submitted a comprehensive site-wide remediation plan for the contaminants of concern in soil and groundwater detected on the property. A Draft Remedial Action Plan for Operable Units 2 through 6 that is focused on soil remediation was submitted to DTSC in 2009. The plan contains a number of recommended technologies to remove contaminants from the soil, in addition to a proposed clean-up schedule for the site. Whittaker has also completed a Draft Operable Unit 7 Feasibility Study to identify and select treatment technologies for both on-site and off-site groundwater. Final approval by DTSC of soil and groundwater clean-up plans is expected by the end of 2010. The question of whether existing active Saugus wells are likely to be contaminated by perchlorate migration prior to the installation of treatment and pumping for perchlorate contamination control has been evaluated by using the groundwater flow model to analyze capture zones of existing active wells through 2006, the scheduled period for permitting, installation of treatment, and restoration of impacted capacity. For that analysis, recognizing current hydrologic conditions and available supplemental SWP supplies, the rate of Saugus pumping was conservatively projected to be in the normal range (7,500 to 15,000 afy) for the near-term. The results of the capture zone analysis, illustrated on Figure 4.10-7, Forecasted Two-Year Groundwater Capture Zones for Active Saugus Production Wells Located Closest to the Whittaker-Bermite Property Santa Clarita, California, were that the two nearest downgradient Saugus wells, Valencia Water Company's Wells 201 and 205, would draw water from very localized areas around the wells and would not draw water from locations where perchlorate has been detected in the Saugus Formation. As shown on the figure, the capture zone analysis projected Well 201 would potentially draw Saugus groundwater from areas located up to 450 feet east of the well, but was unlikely to draw water from areas farther to the east through that time period. During the same time, Well 205 would potentially draw Saugus groundwater from areas as much as 650 feet to the east and northeast of this well.

As a result, the currently active downgradient Saugus wells are expected to remain active as sources of water supply in accordance with the overall operating plan for the Saugus Formation, given the generally low planned pumping from the nearest downgradient Saugus wells in the operating plan through 2006, after which restored capacity and resultant aquifer hydraulic control are scheduled to be in place.

Company's Well Q2 in October 2005 is the same single-pass ion exchange as is planned for restoration of impacted Saugus well capacity.

(5) Groundwater Quality Near the Landmark Village Site

The quality of the groundwater available from the Alluvial aquifer near the Landmark Village project site has been tested. Results from laboratory testing conducted for Valencia Water Company wells expected to serve the Landmark Village project site or very near the Landmark Village site are provided in Recirculated Draft EIR **Appendix 4.10**. The tested well are approved by DPH and are located just northeast of the Landmark Village site in the Valencia Commerce Center. Laboratory testing conducted in July 2009 indicates that all constituents tested were at acceptable levels for drinking water under Title 22 (see Recirculated Draft EIR **Appendix 4.10** for 2009 laboratory test water well results). Revised Final EIR **Appendix F4.10** includes a summary of water quality compliance monitoring results for Valencia Commerce Center Well E-15 from 2006 to 2009. This information indicates that water in this well complies with all federal and state drinking water regulations. Tests conducted for perchlorate indicated non-detect. *The Santa Clarita Valley 2010~~09~~ Water Quality Report* also shows that water supplies provided by the Valencia Water Company, including water from the Commerce Center wells, meet Title 22 standards for drinking water. A copy of the 2010 Water Quality Report is included in Revised Final EIR **Appendix F4.10**.

VWC also investigated the future risk of perchlorate contamination on its new wells. In summary, the approach used to investigate the potential capture of perchlorate-impacted groundwater by the new wells involved three sequential steps: identification of local and regional groundwater flow patterns in the Alluvium, the aquifer in which all four wells are located; application of a single layer groundwater flow model to examine the capture zone of the four-well "well field" under planned operating conditions; and interpretation of potential capture of perchlorate via examination of the wells' theoretical independent capture zone relative to the known occurrence of perchlorate in the Alluvium. The latter step was subsequently augmented by considering other factors, such as the locations and magnitude of pumping between the new wells and the known occurrence of perchlorate, which affect the potential capture of perchlorate by the new wells.

Given that the groundwater resources from the Alluvial aquifer for the Landmark Village project would be produced from wells located along Castaic Creek and over 4 miles west of the area known to be perchlorate-contaminated (i.e., the former Whittaker-Bermite facility), the groundwater supplies for this project are not considered to be at risk due to perchlorate contamination released from the former Whittaker-Bermite facility.²³

²³ See, *Potential Capture of Perchlorate Contamination*, Valencia Water Company's Wells E14 – E17, Prepared by Luhdorff and Scalmanini for the Valencia Water Company, dated April 26, 2006. This report is found in **Appendix 4.10** of this EIR.

Mineral Quality: TDS, Sulfate, Chloride, and Boron. Mineral quality in groundwater is largely influenced by the mineral assemblage of soils and rocks that it comes into contact with. Elevated mineral concentrations could impact beneficial uses; however, the minerals listed in the Basin Plan are not believed to be pollutants of concern due to the anticipated runoff concentrations and the typical mineral concentrations in irrigation water (Castaic Lake Water Agency), which are below the Basin Plan objectives (Table 4.10-8). Therefore, these constituents are not considered pollutants of concern for the proposed project.

Table 4.10-8
Comparison of Basin Plan Mineral Groundwater Objectives with Mean Measured Values in Los Angeles County and SWP Water Quality at Castaic Lake

Mineral	Los Angeles Basin Plan Groundwater Quality Objective ¹ (mg/L)	Range of Mean Concentrations in Urban Runoff ² (mg/L)	Typical Concentration in CLWA Water ³ (mg/L)
Total Dissolved Solids	700	53 – 237	<u>333</u> 279
Sulfate	250	7 – 35	<u>56</u> 57
Chloride	100	4 – 50	<u>76</u> 47

¹ Santa Clara-Bouquet and San Francisquito Canyons Subbasin

² Source: Los Angeles County, 2000. Includes all monitored land uses.

³ Source: The Santa Clarita Valley Water Quality Report (2010~~08~~)

(7) Other Groundwater Quality Issues

Methyl-Tertiary Butyl Ether (MTBE). MTBE has been a concern for the past several years, and on May 17, 2000, DPH adopted a primary MCL for MTBE of 0.013 mg/L. CLWA and the local retail purveyors have been testing for MTBE since 1997 and, to date, have not detected it in any of the production wells.

Total Trihalomethanes (TTHMs). In 2002, the U.S. EPA implemented the new Disinfectants and Disinfection Byproducts Rule. In part, this rule establishes a new MCL of 80 ug/L (based on an annual running average) for TTHM. TTHMs are byproducts created when chlorine is used as a means for disinfection. In 2005, CLWA and the local retail purveyors implemented an alternative method of disinfection, chloramination, to maintain compliance with the new rule and future regulations relating to disinfection byproducts.²⁴ TTHM concentrations have remained significantly below the MCL since implementation of the alternative disinfection method.

²⁴ See EPA site: http://www.epa.gov/region09/water/drinking/files/dwsha_0607.pdf.

Arsenic. The U.S. EPA revised the federal MCL for arsenic from 50 µg/l to 10 µg/l. Naturally occurring arsenic has historically only been detected at concentrations of less than 5 µg/l in local groundwater supplies and at concentrations of less than 3 µg/l in SWP water supplies. The analytical results for arsenic for most groundwater wells in the Valley have been non-detect where the detection limit was 2 µg/l (Luhdorff and Scalmanini, 2004).

c. Santa Clara River

The Memorandum of Understanding (MOU) between the Santa Clarita Valley Purveyors and the United Water Conservation District, which manages surface and groundwater resources in seven groundwater basins in the Lower Santa Clara River Valley Area, was a significant accomplishment when it was prepared and executed in 2001. The MOU initiated a collaborative and integrated approach to data collection; database management; groundwater flow modeling; assessment of groundwater basin conditions, including determination of basin yield amounts; and preparation and presentation of reports, including continued annual reports such as this one for current planning and consideration of development proposals, and also including more technically detailed reports on geologic and hydrologic aspects of the overall stream aquifer system. Meetings of the MOU participants have continued, and integration of the Upper (Santa Clarita Valley) and Lower (United WCD) Santa Clara River databases has been accomplished. As discussed above, a numerical groundwater flow model of the entire Santa Clarita groundwater basin was developed and calibrated in 2002-2004. Subsequent to its initial use in 2004 for assessing the effectiveness of various operating scenarios to restore pumping capacity impacted by perchlorate contamination (by pumping and treating groundwater for water supply while simultaneously controlling the migration of contaminated groundwater), the model was used in 2005 for evaluation of basin yield under varying management actions and hydrologic conditions. The results completed the determination of sustainable operating yield values for both the Alluvium and the Saugus Formation, which were incorporated in the 2005 UWMP. The updated analysis of basin yield, completed in 2009, indicates that the 2008 Operating Plan will maintain river flows at higher levels than occurred prior to urbanization of the Valley.

On occasion, issues have been raised about whether use and management of groundwater in the Santa Clarita Valley have adversely impacted surface water flows into Ventura County. Part of the groundwater modeling work has addressed the surface water flow question as well as groundwater levels and storage. While the sustainability of groundwater has logically derived primarily from projected long-term stability of groundwater levels and storage, it has also derived in part from modeled simulations of surface water flows and the lack of streamflow depletion by groundwater pumping. In addition, the long-term history of groundwater levels in the western and central part of the basin, as illustrated in 2009 Water Report Figures 3-4 and 3-5, supports the modeled analysis and suggests that groundwater has not been lowered in such a way as to induce infiltration from the river and thus impact surface water flows.

Historical annual stream discharge in the Santa Clara River, into and out of the Santa Clarita Valley, is shown on 2009 Water Report Figure 3-14. The upstream gage at Lang Station was reinstated in 2002 and shows a wide range of average annual inflow over the last seven years. The downstream gage was moved in 1996 to its present location near Piru, about two miles downriver from the former County Line Gage. The combined record (1953-2009) of these two downstream gages indicates an annual stream discharge of about 47,000 afy. These data gaged near the County line show notably higher flows from the Santa Clarita Valley into the uppermost downstream basin, the Piru Basin, over the last 30 to 35 years.

de. Imported Water Supplies

Imported water supplies from CLWA are not needed to serve the Landmark Village project's water demand. Landmark Village will use local groundwater and recycled water from local water reclamation plants. Because these two independent water sources (i.e., groundwater and recycled water) meet the potable and non-potable water demands of the Landmark Village project, no potable water would be used or relied upon from CLWA's existing or planned SWP supplies, including the 41,000 af water transfer, which is part of those supplies. Because the Landmark Village project relies only upon local groundwater and recycled water to meet its potable and non-potable water demands, it does not contribute any significant cumulative water impacts in the Santa Clarita Valley. However, the following discussion of imported water supplies is presented in this EIR for information purposes.

(1) State Water Project and Associated Facilities

The SWP is a water supply, storage, and distribution system that includes 28 storage facilities, reservoirs, and lakes; 20 pumping plants; six pumping-generating plants and hydroelectric power plants; and about 660 miles of aqueducts and pipelines.²⁵ Principal SWP facilities are shown on **Figure 4.10-8**.

Summary Description. In the southern Sacramento-San Joaquin Delta (Delta), water is pumped into the 444-mile-long California Aqueduct at the Clifton Court Forebay by the Banks Pumping Plant (or by agreement with the U.S. Bureau of Reclamation, at the Central Valley Project's (CVP) Tracy Pumping Plant). From the southern Delta facilities, water in the California Aqueduct travels along the west side of the San Joaquin Valley and is delivered directly to SWP Contractors or is stored in San Luis Reservoir, the SWP's main storage facility south of the Delta. Water is conveyed via the California Aqueduct to the urban region of the Bay area, and south of San Luis Reservoir, to the primarily agricultural regions in the San Joaquin Valley and the primarily urban regions of the Central Coast and southern California. Water is diverted from the California Aqueduct and delivered directly to SWP Contractors in the central and

²⁵ Bulletin 132-06, Management of the California State Water Project (December 2007), is the most recent published data by DWR describing the status of SWP operations and water deliveries to SWP Contractors. Because Bulletin 132-06 covers SWP activities through calendar year 2005, some of the SWP delivery information presented in this EIR is through calendar year 2005, which is the latest year available. (See this EIR, **Appendix 4.10** [Bulletin 132-06, Management of the California State Water project (December 2007)].)

southern San Joaquin Valley at various locations along the California Aqueduct. The California Aqueduct traverses the west side of the San Joaquin Valley, and water is pumped through a series of four pumping plants (Dos Amigos, Buena Vista, Teerink, and Chrisman) before reaching the Edmonston Pumping Plant. The Edmonston Pumping Plant pumps water over the Tehachapi Mountain Range, and the California Aqueduct then divides into the East Branch and the West Branch. Water intended for use by CLWA is conveyed through the West Branch to Quail and Pyramid Lakes and then to Castaic Lake, the terminus for the West Branch.

SWP Operations, Deliveries, and Constraints. In the early 1960s, DWR began entering into individual water supply contracts with various urban and agricultural public water supply agencies (i.e., SWP Contractors). The total planned annual delivery capability of the SWP and the sum of all SWP Contractors' maximum Table A²⁶ amounts specified in the water supply contracts were approximately 4.2 million acre-feet (maf). The initial SWP storage facilities were designed to meet SWP Contractors' water demands in the early years of the project, with construction of additional storage facilities planned as demands increased. Conveyance facilities were generally designed and constructed to deliver full Table A Amounts to SWP Contractors. Water deliveries to SWP Contractors began as initial SWP facilities were completed in the late 1960s and early 1970s; however, no additional SWP storage facilities have been constructed since that time. (See Recirculated Draft EIR **Appendix 4.10** [DWR Bulletin 132-06, Management of the California State Water Project, December 2007].)

From 1990 to 2003, actual SWP annual deliveries of Table A supplies to SWP Contractors ranged from approximately 550,000 af in 1991 to approximately 3.2 maf in 2000 and 2003 (excluding Article 21 deliveries). The amount of water DWR determines is available and allocates for delivery in a given year is based on that year's hydrologic conditions, the amount of water in storage in the SWP system, current regulatory, operational, and environmental constraints, the SWP Contractors' requests for SWP supplies, and other factors. These factors can significantly alter and reduce the availability of SWP water in any given year. Since historically low SWP Contractor demands have limited deliveries in wetter years when additional supplies were available, historic deliveries only provide an indication of actual SWP delivery capability in supply-limited dry years.

²⁶ Table A is used to define each contractor's portion of the available water supply that DWR will allocate and deliver to each contractor.

The Governor also has directed the Delta Vision Blue Ribbon Task Force to develop a delta management plan. The Task Force presented its findings and recommendations in early 2008, and its strategic plan was issued at the end of 2008. The final report includes a suite of strategic recommendations for long-term, sustainable management of the Bay-Delta. Please refer to the Delta Vision website for the final report and associated information (<http://deltavision.ca.gov/> [last visited March 20, 2009]). The Bay-Delta Conservation Plan is also underway. The Plan is intended to ensure compliance with federal and state Endangered Species Act requirements in the Delta. The \$1 billion proposed in the Governor's comprehensive plan will be used to fund recommendations from both the Delta Vision Task Force and the Conservation Plan.³⁹

Over the long-term, water supply availability and reliability will continue to be assessed by DWR in DWR's biennial State Water Project Delivery Reliability Reports. These reports take into account a myriad of factors in evaluating long-term water supply availability and reliability. These factors include multiple sources of water, a range of water demands, timing of water uses, hydrology, available facilities, regulatory restraints, including pumping constraints due to impacts on listed fish species, water conservation strategies, and future weather patterns. The *Watershed* Decision, the two *Wanger* Decisions, and the two Biological Opinions, highlight the regulatory restraints applicable to SWP supplies, which have impacted DWR deliveries of SWP supplies in the past, and could curtail such deliveries in the future.

Recent 2009 California Legislation. Governor Schwarzenegger and the California legislature successfully crafted a comprehensive package of bills aimed at ensuring a reliable water supply in the future, as well as restoring the Delta and other ecologically sensitive areas. This comprehensive legislation places water supply and the Delta environment on an equal footing, establishing those principles as the State of California's fundamental and co-equal goals for the Delta. In summary, the plan is comprised of four policy bills and an \$11.14 billion bond. The package establishes a Delta Stewardship Council, sets ambitious water conservation policy, ensures better groundwater monitoring, and provides funds for the State Water Resources Control Board for increased enforcement of illegal water diversions. The bond, if approved in the November 2010 general election, will fund, with local cost-sharing, drought relief, water supply reliability, Delta sustainability, statewide water system operational improvements, conservation and watershed protection, groundwater protection, and water recycling and water conservation programs.⁴⁰

³⁹ Please refer to the 2009 DWR Delivery Reliability Report (December 2009) for the current status of planning activities that may affect SWP delivery reliability, pages 13-16, incorporated by reference.

⁴⁰ Please refer to this EIR, **Appendix 4.10**, for DWR's 2009 Comprehensive Water Package, Special Session Policy Bills and Bond Summary, dated November 2009.

5. Appropriates funding from Proposition 84 to fund the Two-Gates Fish Protection Demonstration Program, a project in the central Delta which will utilize operable gates for protection of sensitive species and management of water supply.

SB 6 - Groundwater Monitoring: SB 6 requires, for the first time in California's history, that local agencies monitor the elevation of their groundwater basins to help better manage the resource during both normal water years and drought conditions. Specifically, this bill:

1. Requires the DWR to establish a priority schedule for the monitoring of groundwater basins and the review of groundwater elevation reports, and to make recommendations to local entities to improve the monitoring programs.
2. Requires DWR to assist local monitoring entities with compliance with this statute.
3. Allows local entities to determine regionally how best to set up their groundwater monitoring program, crafting the program to meet their local circumstances.
4. Provides landowners with protections from trespass by state or local entities.
5. Provides that if the local agencies fail to implement a monitoring program and/or fail to provide the required reports, DWR may implement the groundwater monitoring program for that region.
6. Provides that failure to implement a monitoring program will result in the loss of eligibility for state grant funds by the county and the agencies responsible for performing the monitoring duties.

~~SB 7~~SB 7X7 - Statewide Water Conservation: ~~SB 7~~SB 7X7 creates a framework for future planning and actions by urban and agricultural water suppliers to reduce California's water use. For the first time in California's history, this bill requires the development of agricultural water management plans and requires urban water agencies to reduce statewide per capita water consumption 20 percent by 2020. Specifically, this bill:

1. Establishes multiple pathways for urban water suppliers to achieve the statewide goal of a 20 percent reduction in urban water use. Specifically, urban water suppliers may:
 - (a) Set a conservation target of 80 percent of their baseline daily per capita water use;
 - (b) Utilize performance standards for water use that are specific to indoor, landscape, and commercial, industrial and institutional uses;
 - (c) Meet the per capita water use goal for their specific hydrologic region as identified by DWR and other state agencies in the 20 percent by 2020 Water Conservation Plan; or
 - (d) Use an alternate method that is to be developed by DWR before December 31, 2010.
2. Requires urban water suppliers to set an interim urban water use target and meet that target by December 31, 2015 and meet the overall target by December 31, 2020.

most significant of which include establishing a Delta Stewardship Council to govern the Delta; setting aggressive water conservation policies and targets for both urban and agricultural uses of water (policies that mandate a 20 percent reduction in urban per capita water use by December 31, 2020, including incremental progress toward the 20 percent goal by reducing per capita urban water use by at least 10 percent on or before December 31, 2015); and a bond measure authorizing the funding of several water reliability, conservation, and efficiency projects. The effects of the bills and bond package cannot be quantified at this time; however, they represent state-wide solutions to several competing interests, including drought relief, water supply reliability, Delta sustainability, water conservation, and groundwater protection.

Draft Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem. As described above, in November 2009, California enacted a comprehensive package of four policy bills and a bond measure intended to meet California's growing water challenges by adopting a policy of sustainable water supply management to ensure a reliable water supply for the State and to restore the Delta and other ecologically sensitive areas. One of these bills, Senate Bill No. 1 (SB 1) (Stats. 2009 (7th Ex. Sess.) ch 5, § 39) contains the Sacramento-San Joaquin Delta Reform Act of 2009 (Delta Reform Act), Water Code section 85000 et seq. The Delta Reform Act establishes a Delta Stewardship Council (Council), tasked with developing a comprehensive, long-term management plan for the Delta, known as the Delta Plan, and providing direction to multiple state and local agencies that take actions related to the Delta. Water Code section 85086 requires the State Water Resources Control Board (State Water Board) to use the best available scientific information gathered as part of a public process conducted as an informational proceeding to develop new flow criteria for the Delta ecosystem to protect public trust resources. The purpose of the flow criteria is to inform planning decisions for the Delta Plan and the Bay Delta Conservation Program (BDCP). In July 2010 and in accordance with the legislation, the SWRCB prepared a report entitled, Draft Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem. A summary of this report is provided below.

The Sacramento-San Joaquin Delta (Delta) is a critically important natural resource for California and the nation. It is both the hub of California's water supply system and the most valuable estuary and wetlands on the western coast of the Americas. The Delta is in ecological crisis, resulting in high levels of conflict that affect the sustainability of existing water policy in California. Several species of fish have been listed as protected species under the California Endangered Species Act (CESA) and under the federal Endangered Species Act (ESA). These two laws and other regulatory constraints have restricted water diversions from the Delta in an effort to prevent further harm to the protected species.

The State Water Board held an informational proceeding on March 22, 23, and 24, 2010, to receive scientific information from technical experts on the Delta outflows needed to protect public trust resources. The State Water Board also received information at the proceeding on flow criteria for inflow to the Delta from the Sacramento and San Joaquin rivers and Delta hydrodynamics. The State Water Board did not solicit information on the need for water for other beneficial uses, including the amount of water needed for human health and safety, during the informational proceeding. Nor did the State Water Board consider other policy considerations, such as the state goal of providing a decent home and suitable living environment for every Californian. During this process, participants cautioned the the State Water Board on the limitations of any flow criteria (Fleenor et al., 2010).

State Water Board Approach: In determining the extent of protection to be afforded public trust resources through the development of the flow criteria, the State Water Board considered the broad goals of the planning efforts the criteria are intended to inform, including restoring and promoting viable, self-sustaining populations of aquatic species. Given the accelerated time frame in which to develop the criteria, the State Water Board’s approach to developing criteria was limited to review of instream needs in the Delta ecosystem, specifically fish species and Delta outflows, while also receiving information on hydrodynamics and major tributary inflows. The State Water Board’s flow criteria determinations are accordingly limited to protection of aquatic resources in the Delta.

Limitations of State Water Board Approach: When setting flow objectives with regulatory effect, the State Water Board reviews and considers all the effects of the flow objectives through a broad inquiry into all public trust and public interest concerns. For example, the State Water Board would consider other public trust resources potentially affected by Delta outflow requirements and impose measures for the protection of those resources, such as requiring sufficient water for cold water pool in reservoirs to maintain temperatures in Delta tributaries. The State Water Board would also consider a broad range of public interest matters, including economics, power production, human health and welfare requirements, and the effects of flow measures on non-aquatic resources (such as habitat for terrestrial species). The limited process adopted for this proceeding does not include this comprehensive review.

The State Water Board’s Public Trust Responsibilities in this Proceeding: Under the public trust doctrine, the State Water Board must take the public trust into account in the planning and allocation of water resources, and to protect public trust uses whenever feasible. (National Audubon Society v. Superior Court (1983) 33 Cal.3d 419, 446.) Public trust values include navigation, commerce, fisheries, recreation, scenic, and ecological values. “[I]n determining whether it is ‘feasible’ to protect public trust values like fish and wildlife in a particular instance, the [State Water] Board must determine whether protection of those values, or what level of protection, is ‘consistent with the public interest.’” (State Water Resources Control Bd. Cases (2006) 136 Cal.App.4th 674, 778.) The State Water Board does not make any

determination regarding the feasibility of the public trust recommendations and consistency with the public interest in this report.

In this forum, the State Water Board has not considered the allocation of water resources, the application of the public trust to a particular water diversion or use, water supply impacts, or any balancing between potentially competing public trust resources (such as potential adverse effects of increased Delta outflow on the maintenance of coldwater resources for salmonids in upstream areas). Any such application of the State Water Board's public trust responsibilities, including any balancing of public trust values and water rights, would be conducted through an adjudicative or regulatory proceeding. Instead, the State Water Board's focus here is solely on identifying public trust resources in the Delta ecosystem and determining the flow criteria, as directed by Water Code section 85086.

Future Use of This Report: None of the determinations in this report have regulatory or adjudicatory effect. Any process with regulatory or adjudicative effect must take place through the State Water Board's water quality control planning, water rights processes, or public trust proceedings in conformance with applicable law. In the State Water Board's development of Delta flow objectives with regulatory effect, it must ensure the reasonable protection of beneficial uses, which may entail balancing of competing beneficial uses of water, including municipal and industrial uses, agricultural uses, and other environmental uses. The State Water Board's evaluation will include an analysis of the effect of any changed flow objectives on the environment in the watersheds in which Delta flows originate, the Delta, and the areas in which Delta water is used. It will also include an analysis of the economic impacts that result from changed flow objectives. Nothing in either the Delta Reform Act or in this report amends or otherwise affects the water rights of any person. In carrying out its water right responsibilities, the State Water Board may impose any conditions that in its judgment will best develop, conserve, and utilize in the public interest the water to be appropriated. In making this determination, the State Water Board considers the relative benefit to be derived from all beneficial uses of the water concerned and balances competing interests.

If the DWR and/or the USBR in the future request the State Water Board to amend the water right permits for the State Water Project (SWP) and/or the Central Valley Project (CVP) to move the authorized points of diversion for the projects from the southern Delta to the Sacramento River, Water Code section 85086 directs the State Water Board to include in any order approving a change in the point of the diversion of the projects appropriate Delta flow criteria. At that time, the State Water Board will determine appropriate permit terms and conditions. That decision will be informed by the analysis in this report, but will also take many other factors into consideration, including any newly developed scientific information, habitat conditions at the time, and other policies of the State, including the relative benefit to be derived from all beneficial uses of water. The flow recommendations in this report are not pre-

decisional in regard to any State Water Board action. (e.g., Wat. Code, § 85086, subd. (c)(1).) The water supply costs of the flows identified in this report illustrate to the State Water Board the need for an integrated approach to management of the Delta. Best available science supports that it is important to directly address the negative effects of other stressors, including habitat, water quality, and invasive species, that contribute to higher demands for water to protect public trust resources. The flow criteria highlight the continued need for the BDCP to develop an integrated set of solutions and to implement non flow measures to protect public trust resources.

Summary Determinations: This report contains the State Water Board’s determinations as to the flows that protect public trust resources in the Delta, under the narrow circumstances analyzed in this report.

As required, the report includes the volume, timing, and quality of flow for protection of public trust resources under different hydrologic conditions. The flow criteria represent a technical assessment only of flow and operational requirements that provide fishery protection under existing conditions. The flow criteria contained in this report do not represent flows that might be protective under other conditions. The State Water Board recognizes that changes in existing conditions may alter the need for flow. Changes in existing conditions that may affect flow needs include, but are not limited to, reduced reverse flows in Delta channels, increased tidal habitat, improved water quality, reduced competition from invasive species, changes in the point of diversion of the State Water Project (SWP) and Central Valley Project (CVP), and climate change.

Flow Criteria and Conclusions: The numeric criteria determinations in this report must be considered in the following context:

- The flow criteria in this report do not consider any balancing of public trust resource protection with public interest needs for water.
- The State Water Board does not intend that the criteria should supersede requirements for health and safety such as the need to manage water for flood control.
- There is sufficient scientific information to support the need for increased flows to protect public trust resources; there is uncertainty regarding specific numeric criteria.

The State Water Board has considered the testimony presented during the Board’s informational proceeding to develop flow criteria and to support the following summary conclusions. Several of these summary conclusions rely in whole or in part on conclusions and recommendations made to the State

Water Board by the Delta Environmental Flows Group⁴² and the University of California at Davis Delta Solutions Group⁴³.

1. The effects of non-flow changes in the Delta ecosystem, such as nutrient composition, channelization, habitat, invasive species, and water quality, need to be addressed and integrated with flow measures.
2. Recent Delta flows are insufficient to support native Delta fishes for today's habitats.⁴⁴ Flow modification is one of the immediate actions available although the links between flows and fish response are often indirect and are not fully resolved. Flow and physical habitat interact in many ways, but they are not interchangeable.
3. In order to preserve the attributes of a natural variable system to which native fish species are adapted, many of the criteria developed by the State Water Board are crafted as percentages of natural or unimpaired flows. These criteria include:
 - 75% of unimpaired Delta outflow from January through June;
 - 75% of unimpaired Sacramento River inflow from November through June; and
 - 60% of unimpaired San Joaquin River inflow from February through June.

It is not the State Water Board's intent that these criteria be interpreted as precise flow requirements for fish under current conditions, but rather they reflect the general timing and magnitude of flows under the narrow circumstances analyzed in this report. In comparison, historic flows over the last 18 to 22 years have been:

- approximately 30% in drier years to almost 100% of unimpaired flows in wetter years for Delta outflows;
 - about 50% on average from April through June for Sacramento River inflows; and
 - approximately 20% in drier years to almost 50% in wetter years for San Joaquin River inflows.
4. Other criteria include: increased fall Delta outflow in wet and above normal years; fall pulse flows on the Sacramento and San Joaquin Rivers; and flow criteria in the Delta to help protect fish from

⁴² The Delta Environmental Flows Group of experts consists of William Bennett, Jon Burau, Cliff Dahm, Chris Enright, Fred Feyrer, William Fleenor, Bruce Herbold, Wim Kimmerer, Jay Lund, Peter Moyle, and Matthew Nobriga.

⁴³ The Delta Solutions Group consists of William Bennett, William Fleenor, Jay Lund, and Peter Moyle.

⁴⁴ This statement should not be construed as a critique of the basis for existing regulatory requirements included in the 2006 Bay-Delta Plan and biological opinions. Those requirements were developed pursuant to specific statutory requirements and considerations that differ from this proceeding. Particularly when developing water quality objectives, the State Water Board must consider many different factors including what constitutes reasonable protection of the beneficial use and economic considerations. In addition, the biological opinions for the SWP and CVP Operations Criteria and Plan were developed to prevent jeopardy to specific fish species listed pursuant to the federal Endangered Species Act; in contrast, the flow criteria developed in this proceeding are intended to halt population decline and increase populations of certain species.

mortality in the central and southern Delta resulting from operations of the State and federal water export facilities.

5. The report also includes determinations regarding: variability and the natural hydrograph, floodplain activation and other habitat improvements, water quality and contaminants, cold water pool management, and adaptive management:

- Criteria should reflect the frequency, duration, timing, and rate of change of flows, and not just volumes or magnitudes. Accordingly, whenever possible, the criteria specified above are expressed as a percentage of the unimpaired hydrograph.
- Inflows should generally be provided from tributaries to the Delta watershed in proportion to their contribution to unimpaired flow unless otherwise indicated.
- Studies and demonstration projects for, and implementation of, floodplain restoration, improved connectivity and passage, and other habitat improvements should proceed to provide additional protection of public trust uses and potentially allow for the reduction of flows otherwise needed to protect public trust resources in the Delta.
- The Central Valley and San Francisco Regional Water Quality Control Boards should continue developing Total Maximum Daily Loads (TMDLs) for all listed pollutants and adopting programs to implement control actions.
- The Central Valley Regional Water Quality Control Board should require additional studies and incorporate discharge limits and other controls into permits, as appropriate, for the control of nutrients and ammonia.
- Temperature and water supply modeling and analyses should be conducted to identify conflicting requirements to achieve both flow and cold water temperature goals.
- A strong science program and a flexible management regime are critical to improving flow criteria. The State Water Board should work with the Council, the Delta Science Program, BDCP, the Interagency Ecological Program, and others to develop the framework for adaptive management that could be relied upon for the management and regulation of Delta flows.
- The numeric criteria recommended in this report are all recommendations that are only appropriate for the current physical system and climate; as other factors change the flow needs advanced in this report will also change. As physical changes occur to the environment and our understanding of species needs improves, the long-term flow needs will also change. Actual flows should be informed by adaptive management.
- Only the underlying principles for the numeric criteria and other measures are advanced as long term recommendations.

6. Past changes in the Delta may influence migratory cues for some fishes. These cues are further scrambled by a reverse salinity gradient in the south Delta. It is important to establish seaward gradients and create more slough networks with natural channel geometry. Achieving a variable more complex estuary requires establishing seasonal gradients in salinity and other water quality variables and diverse habitats throughout the estuary. These goals in turn encourage policies which

establish internal Delta flows that create a tidally-mixed upstream- downstream gradient (without cross-Delta flows) in water quality. Continued through-Delta conveyance is likely to continue the need for in- Delta flow requirements and restrictions to protect fish within the Delta.

7. Restoring environmental variability in the Delta is fundamentally inconsistent with continuing to move large volumes of water through the Delta for export. The drinking and agricultural water quality requirements of through-Delta exports, and perhaps even some current in-Delta uses, are at odds with the water quality and variability needs of desirable Delta species.
8. The Delta ecosystem is likely to dramatically shift within 50 years due to large scale levee collapse. Overall, these changes are likely to promote a more variable, heterogeneous estuary. This changed environment is likely to be better for desirable estuarine species; at least it is unlikely to be worse.
9. Positive changes in the Delta ecosystem resulting from improved flow or flow patterns will benefit humans as well as fish and wildlife. Ecosystems are complex; there are many factors that affect the quality of the habitat that they provide. These factors combine in ways that can amplify the effect of the factors on aquatic resources. The habitat value of the Delta ecosystem for favorable species can be improved by habitat restoration, contaminant and nutrient reduction, changes in diversions, control of invasive species, and island flooding. Each of these non-flow factors has the potential to interact with flow to affect available aquatic habitat in Delta channels.

The State Water Board supports the most efficient use of water that can reasonably be made. The flow improvements that the State Water Board identifies in this report as being necessary to protect public trust resources illustrate the importance of addressing the negative effects of these other stressors that contribute to higher than necessary demands for water to provide resource protection. Future habitat improvements or changes in nutrients and contaminants, for example, may change the response of fishes to flow. Addressing other stressors directly will be necessary to assure protection of public trust resources and could change the demands for water to provide resource protection in the future. Uncertainty regarding the effects of habitat improvement and other stressors on flow demands for resource protection highlights the need for continued study and adaptive management to respond to changing conditions. The flow criteria identified in this report highlight the need for the BDCP to develop an integrated set of solutions, to address ecosystem flow needs, including flow and non-flow measures. Although flow modification is an action that can be implemented in a relatively short time in order to improve the survival of desirable species and protect public trust resources, public trust resource protection cannot be achieved solely through flows – habitat restoration also is needed. One cannot substitute for the other; both flow improvements and habitat restoration are essential to protecting public trust resources.

CLWA Imported Water Supplies and Facilities. CLWA receives SWP and non-SWP imported water through the terminus of the West Branch of the California Aqueduct at Castaic Lake. Water supplies (whether derived from local or imported water supplies) require treatment (filtration and disinfection) prior to distribution. CLWA operates two water treatment plants, the Earl Schmidt Filtration Plant

located near Castaic Lake and the Rio Vista Water Treatment Plant located in Saugus. CLWA produces water that meets drinking water standards set by the U.S. EPA and DPH. SWP water has different aesthetic characteristics than groundwater with lower dissolved mineral concentrations (total dissolved solids) of approximately 250 to 360 mg/L, and lower hardness (as calcium carbonate) of about 105 to 135 mg/L.

Historically, the State Water Project (SWP) delivered only surface water from the Sacramento- San Joaquin River Delta. However, CLWA and other SWP users, in anticipation of drought, many years ago began “water banking” programs where SWP water could be stored or exchanged during wet years and withdrawn in dry years. The last three years have seen severe state-wide drought. As a result, water has been withdrawn from the water banking programs and pumped into the SWP system. During the period of 2008 through 2010, a greater portion of water in the SWP has been this “pumped-in” water. The “pumped-in” water has met all water quality standards established by DWR under its anti-degradation policy for the SWP. The SWP water from Castaic Lake is treated and disinfected at the Earl Schmidt Filtration Plant (ESFP) and Rio Vista Water Treatment Plant (RVWTP) (both owned and operated by CLWA), and is distributed to the four retail water purveyors through a system of pipelines.

The ~~RVWTP~~ Rio Vista Plant is planned for future expansion from its current 30 million gallons per day (mgd) treatment capacity to 60 mgd, and eventually to 90 mgd as demands for treated water increase. ~~ESFP~~ The Earl Schmidt Plant operates at a treatment capacity of 56 mgd. The current combined capacity of the two treatment plants is approximately 86 mgd.

Santa Clarita Valley Water Supply. The current water supply for the Santa Clarita Valley is derived from both local and imported sources. The principal components of this supply are imported water from the SWP, water purchased in Kern County, and local groundwater from both the Alluvial aquifer and the Saugus Formation. Since 2003, these water supplies have been augmented by the initiation of deliveries from CLWA's recycled water program.

In addition to these supplies, which are available and used to meet service area demands every year, CLWA also has storage programs that are planned for use under shortage situations (e.g., during drier years when imported supplies are limited). These storage programs improve the reliability of CLWA's overall supplies by enabling existing supplies that are not needed in wetter years to be stored for use in drier years, but they do not increase the supplies available to meet service area demand every year.

Table 4.10-11, Summary of Current and Planned Water Supplies and Banking Programs, summarizes the existing and planned water supplies and banking programs for the CLWA service area. According to CLWA, the information presented on this table is not intended to be an operational plan for how supplies

Water Supply Sources	Supply (af)				
	2010	2015	2020	2025	2030
Planned Supplies⁽¹⁾					
Local Supplies					
Groundwater	10,000	10,000	20,000	20,000	20,000
Restored wells (Saugus Formation)	10,000	10,000	10,000	10,000	10,000
New Wells (Saugus Formation)	0	0	10,000	10,000	10,000
Recycled Water - CLWA ⁽⁶⁾	0	1,600	6,300	11,000	15,700
Recycled Water - Newhall Ranch	0	1,500	2,500	3,500	5,400
Total Planned Supplies	10,000	13,100	28,800	34,500	41,100
Planned Banking Programs⁽³⁾					
Additional Planned Banking	0	20,000	20,000	20,000	20,000
Total Planned Banking Programs	0	20,000	20,000	20,000	20,000

¹ The values shown under "Existing Supplies" and "Planned Supplies" are supplies projected to be available in average/normal years. The values shown under "Existing Banking Programs" and "Planned Banking Programs" are the total amounts currently in storage; the values shown under "Planned Banking Programs" represent the annual maximum withdrawal capacity. In 2008, CLWA also acquired approximately 850 af of non-SWP water supply by entering into a water transfer agreement with Yuba County Water Agency (YCWA); however, CLWA has not yet updated its water supplies/demand tables to reflect this additional non-SWP supply.

² SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of average deliveries projected to be available, based on Tables 6-3 and 6-12 of DWR's "Draft State Water Project Delivery Reliability Report 2009." Year 2030 figure is calculated by multiplying by DWR's 2029 percentage of 60%.

³ Supplies shown are total amounts that can be withdrawn, and would typically be used only during dry years.

⁴ Initial term of the Ventura County entities' flexible storage account is ten years (from 2006 to 2015).

⁵ Supplies shown are the total amount currently in storage, and would typically be used only during dry years. Once the current storage amount is withdrawn, this supply would no longer be available and in any event, is not available after 2013.

⁶ Recycled water supplies based on projections provided in CLWA's 2005 UWMP Chapter 4, Recycled Water.

⁷ CLWA has 64,898 af of recoverable water as of 12/31/09 in the Rosedale-Rio Bravo Water Banking and Recovery Program.

⁸ Supplies shown are the total amount currently in storage. As of December 31, 2007, there is 18,828 af of water stored in the Semitropic Groundwater Storage Bank by The Newhall Land and Farming Company for the Newhall Ranch Specific Plan. The stored water can be extracted from the bank in dry years in amounts up to 4,950 afy. Newhall Ranch is located within the CLWA service area.

Source: *Revised Landmark WSA* (January 2010)

Average/Normal Year. Table 4.10-12, Projected Average/Normal Year Supplies and Demands, summarizes water supplies available to meet demands over the 20-year planning period during an average/normal year. As presented in the table, water supply is broken down into existing and planned water supply sources, including wholesale (imported) water, local supplies, and banking programs. Demands also are reflected on the table with the effects of an estimated 10 percent urban reduction resulting from the implementation of conservation Best Management Practices. Demands do not reflect an additional 10 percent urban per capita reduction by 2020 resulting from the ~~recently~~ approved California legislation (see discussion of ~~SB-75B 7X7~~, above). The amount of additional conservation

expected in the Santa Clarita Valley as a result of this bill is the subject of study in the 2010 Urban Water Management Plan (2010 UWMP) presently being prepared by CLWA. The 2010 UWMP is expected to be released no later than June 2011.

Single-Dry Year. Table 4.10-13, **Projected Single-Dry Year Supplies and Demands**, shows the existing and planned water supplies available to meet demands for the CLWA service area over the 20-year planning period, during a single-dry year. The SWP supplies projected to be available in a single-dry year are based on a repeat of the worst-case hydrologic conditions that occurred in California in 1977. Demand during dry years was estimated to increase by 10 percent. **Table 4.10-13** does not reflect a decrease in demand of 20 percent per capita resulting from the passage of ~~SB 7X7~~ SB 7X7, as described above.

**Table 4.10-12
Projected Average/Normal Year Supplies and Demands**

Water Supply Sources	Supply (af)				
	2010	2015	2020	2025	2030
Existing Supplies					
Wholesale (Imported)	69,707	69,707	69,707	69,707	69,707
SWP Table A Supply ⁽¹⁾	57,100	57,100	57,100	57,100	57,100
Buena Vista-Rosedale	11,000	11,000	11,000	11,000	11,000
Nickel Water - Newhall Ranch	1,607	1,607	1,607	1,607	1,607
Flexible Storage Account (CLWA) ⁽²⁾	0	0	0	0	0
Flexible Storage Account (Ventura County) ⁽²⁾	0	0	0	0	0
Local Supplies					
Groundwater	46,000	46,000	46,000	46,000	46,000
Alluvial Aquifer	35,000	35,000	35,000	35,000	35,000
Saugus Formation	11,000	11,000	11,000	11,000	11,000
Recycled Water	1,700	1,700	1,700	1,700	1,700
Total Existing Supplies ⁽¹⁾	117,407	117,407	117,407	117,407	117,407
Existing Banking Programs					
Semitropic Water Bank ⁽²⁾	0	0	0	0	0
Rosedale-Rio Bravo ⁽²⁾	0	0	0	0	0
Semitropic Water Bank – Newhall Land ⁽²⁾	0	0	0	0	0
Total Existing Banking Programs	0	0	0	0	0
Planned Supplies					
Local Supplies					
Groundwater	0	0	0	0	0
Restored wells (Saugus Formation) ⁽²⁾	0	0	0	0	0
New Wells (Saugus Formation) ⁽²⁾	0	0	0	0	0
Recycled Water - CLWA ⁽³⁾	0	1,600	6,300	11,000	15,700
Recycled Water - Newhall Ranch	0	1,500	2,500	3,500	5,400
Total Planned Supplies	0	3,100	8,800	14,500	21,100
Planned Banking Programs					
Additional Planned Banking ⁽²⁾	0	0	0	0	0
Total Planned Banking Programs	0	0	0	0	0
Total Existing and Planned Supplies and Banking ⁽¹⁾	117,407	120,507	126,207	131,907	138,507

Water Supply Sources	Supply (af)				
	2010	2015	2020	2025	2030
Total Estimated Demand (w/o conservation) ⁽⁴⁾	100,050	109,400	117,150	128,400	138,300
Conservation at 10% ⁽⁵⁾	(8,600)	(9,700)	(10,700)	(11,900)	(12,900)
Total Adjusted Demand at 10% Conservation	91,450	99,700	106,450	116,500	125,400
Net Water Surplus (Deficit)	25,957	20,807	19,757	15,407	13,107

¹ SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of average deliveries projected to be available on Tables 6-3 and 6-12 of DWR's "Draft State Water Project Delivery Reliability Report 2009." Year 2030 figure is calculated by multiplying by DWR's 2029 percentage of 60%.

² Not needed during average/normal years.

³ Recycled water supplies based on projections provided in CLWA's 2005 UWMP Chapter 4, Recycled Water.

⁴ Demands are for uses within the existing CLWA service area. Demands for any annexations to the CLWA service area are not included.

⁵ A 10 percent reduction on urban portion of total normal demand is estimated to result from conservation best management practices, as discussed in CLWA's 2005 UWMP, Chapter 7. Not shown is a 10 percent per capita reduction in urban demand by 2015 and a 20 percent per capita reduction in urban demand by 2020 now mandated by ~~SB 757~~ SB 7X7.

Source in part: *Revised Landmark WSA* (January 2010)

Table 4.10-13
Projected Single-Dry Year Supplies and Demands

Water Supply Sources	Supply (af)				
	2010	2015	2020	2025	2030
Existing Supplies					
Wholesale (Imported)	25,367	26,267	25,887	26,787	27,787
SWP Table A Supply ⁽¹⁾	6,700	7,600	8,600	9,500	10,500
Buena Vista-Rosedale	11,000	11,000	11,000	11,000	11,000
Nickel Water - Newhall Ranch	1,607	1,607	1,607	1,607	1,607
Flexible Storage Account (CLWA)	4,680	4,680	4,680	4,680	4,680
Flexible Storage Account (Ventura County) ⁽²⁾	1,380	1,380	0	0	0
Local Supplies					
Groundwater	47,500	47,500	47,500	47,500	47,500
Alluvial Aquifer	32,500	32,500	32,500	32,500	32,500
Saugus Formation	15,000	15,000	15,000	15,000	15,000
Recycled Water	1,700	1,700	1,700	1,700	1,700
Total Existing Supplies	74,567	75,467	75,087	75,987	76,987
Existing Banking Programs					
Semitropic Water Bank ⁽³⁾	17,000	0	0	0	0
Rosedale-Rio Bravo ⁽⁵⁾	20,000	20,000	20,000	20,000	20,000
Semitropic Water Bank – Newhall Land ⁽¹⁰⁾	4,950	4,950	4,950	4,950	4,950
Total Existing Banking Programs	41,950	24,950	24,950	24,950	24,950

Water Supply Sources	Supply (af)				
	2010	2015	2020	2025	2030
Planned Supplies					
Local Supplies					
Groundwater	10,000	10,000	20,000	20,000	20,000
Restored wells (Saugus Formation)	10,000	10,000	10,000	10,000	10,000
New Wells (Saugus Formation)	0	0	10,000	10,000	10,000
Recycled Water - CLWA ⁽⁴⁾	0	1,600	6,300	11,000	15,700
Recycled Water - Newhall Ranch	0	1,500	2,500	3,500	5,400
Total Planned Supplies	10,000	13,100	28,800	34,500	41,100
Planned Banking Programs					
Additional Planned Banking ⁽⁶⁾	0	20,000	20,000	20,000	20,000
Total Planned Banking Programs	0	20,000	20,000	20,000	20,000
Total Existing and Planned Supplies and Banking⁽¹¹⁾	126,517	133,517	148,837	155,437	163,037
Total Estimated Demand (w/o conservation) ^{(7) (8)}	110,100	120,300	128,900	141,200	152,100
Conservation at 10% ⁽⁹⁾	(9,500)	(10,700)	(11,700)	(13,100)	(14,200)
Total Adjusted Demand at 10% Conservation	100,600	109,600	117,200	128,100	137,900
Net Water Surplus (Deficit)	25,917	23,917	31,637	27,337	25,137

¹ SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of single dry year deliveries projected to be available on Tables 6-4 and 6-13 of DWR's "Draft State Water Project Delivery Reliability Report 2009." Year 2030 figure is calculated by multiplying by DWR's 2029 percentage of 11%.

² Initial term of the Ventura County entities' flexible storage account is ten years (from 2006 to 2015).

³ The total amount of water currently in storage is 50,870 af, available through 2013. Withdrawals of up to this amount are potentially available in a dry year, but given possible competition for withdrawal capacity with other Semitropic banking partners in extremely dry years, it is assumed here that about one third of the total amount stored could be withdrawn.

⁴ Recycled water supplies based on projections provided in CLWA's 2005 UWMP Chapter 4, Recycled Water.

⁵ CLWA has 64,898 af of recoverable water as of 12/31/07 in the Rosedale-Rio Bravo Water Banking and Recovery Program.

⁶ Assumes additional planned banking supplies available by 2014.

⁷ Assumes increase in total demand of 10 percent during dry years.

⁸ Demands are for uses within the existing CLWA service area. Demands for any annexations to the CLWA service area are not included.

⁹ A 10 percent reduction on urban portion of total normal year demand is estimated to result from conservation best management practices ($[\text{urban portion of total normal year demand} \times 1.10] \times 0.10$), as discussed in CLWA's 2005 UWMP, Chapter 7. Not shown is a 10 percent per capita reduction in urban demand by 2015 and a 20 percent per capita reduction in urban demand by 2020 now mandated by ~~SB 75B 7X7~~.

¹⁰ Delivery of stored water from the Newhall Land Semitropic Groundwater Bank requires further agreements between CLWA and Newhall.

¹¹ In 2008, CLWA also acquired approximately 850 af of non-SWP imported water supply by entering into a water transfer agreement with Yuba County Water Agency (YCWA); however, CLWA has not yet updated its water supplies/demand tables to reflect this additional non-SWP imported supply.

Source: *Revised Landmark WSA* (January 2010).

Multiple-Dry Years. Table 4.10-14, **Projected Multiple-Dry Year Supplies and Demands**, shows the existing and planned water supplies available to meet demands for the CLWA service area over the 20-year planning period, during multiple-dry years. The multiple-dry year is based on a repeat of the worst-case four-year drought in California from 1931 to 1934. Demand during multiple-dry years was estimated to increase by 10 percent. Table 4.10-14 does not reflect a decrease in demand of 20 percent resulting from the passage of ~~SB 75B 7X7~~, as described above.

Water Supply Sources	Supply (af)				
	2010	2015	2020	2025	2030
Total Adjusted Demand at 10% Conservation	100,600	109,600	117,200	128,100	137,900
Net Water Surplus (Deficit)	25,167	21,567	29,327	24,127	20,927

- ¹ Supplies shown are annual averages over four consecutive dry years (unless otherwise noted).
- ² SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of average deliveries projected to be available during the worst case four-year drought of 1931-1934 as provided in Table 6-13 of DWR's "Draft State Water Project Delivery Reliability Report 2009." Year 2030 figure is calculated by multiplying by DWR's 2029 percentage of 35%.
- ³ Based on total storage amount available ÷ by 4-yr dry pd.). Initial term of the Ventura County entities' flexible storage account is 10 years (2006-2015).
- ⁴ Total Saugus pumping is the avg. annual amount that would be pumped under the groundwater operating plan summarized in Table 3-6, 2005 UWMP.
- ⁵ Recycled water supplies based on projections provided in CLWA's 2005 UWMP Chapter 4, Recycled Water.
- ⁶ CLWA has 64,898 af of recoverable water as of 12/31/07 in the Rosedale-Rio Bravo Water Banking and Recovery Program.
- ⁷ Average dry year period supplies could be up to 20,000 af for each program depending on storage amounts at the beginning of the dry period.
- ⁸ Assumes additional planned banking supplies available by 2014.
- ⁹ Assumes increase in total demand of 10 percent during dry years.
- ¹⁰ Demands are for uses within the existing CLWA service area. Demands for any annexations to the CLWA service area are not included.
- ¹¹ A 10 percent reduction on urban portion of total normal year demand is estimated to result from conservation best management practices ([urban portion of total normal year demand x 1.10] * 0.10), as discussed in CLWA's 2005 UWMP, Chapter 7. Not shown is a 10 percent per capita reduction in urban demand by 2015 and a 20 percent per capita reduction in urban demand by 2020 now mandated by ~~SB-7~~SB 7X7.
- ¹² Delivery of stored water from the Newhall Land Semitropic Groundwater Bank requires further agreements between CLWA and Newhall.
- ¹³ In 2008, CLWA also acquired approximately 850 af of non-SWP imported water supply by entering into a water transfer agreement with Yuba County Water Agency (YCWA); however, CLWA has not yet updated its water supplies/demand tables to reflect this additional non-SWP imported supply.
- Source: *Revised Landmark WSA* (January 2010).

As shown on each table, SWP supply estimates are based on the data presented in the 2009 DWR Delivery Reliability Report, with SWP water supplies allocated among SWP Contractors in accordance with their water supply contract provisions currently in effect.⁴⁶

⁴⁶ The water supply contracts between DWR and the SWP Contractors include provisions regarding how total available SWP water supplies are allocated among SWP Contractors. The allocation provisions currently in effect are as they were amended by the Monterey Amendments. The Monterey Amendments have been in effect for more than ten years, but pursuant to litigation, is undergoing a second environmental review by DWR. In October 2007, DWR released the new Draft EIR analyzing the Monterey Amendments to the SWP contracts, including Kern water bank transfers and associated actions as part of the Monterey Settlement Agreement (SCH No. 2003011118). This Draft EIR, also known as the Monterey Plus Draft EIR, addresses the significant environmental impacts of changes to the SWP operations that are a consequence of the Monterey Amendments and the Monterey Settlement Agreement. It also discusses the project alternatives, growth inducement, water supply reliability, as well as potential areas of controversy and concern. The Draft EIR is available for public inspection and review by contacting DWR in Sacramento or from DWR's website, http://www.des.water.ca.gov/mitigation_restoration_branch/rpmi_section/projects/EIR_index.cfm. The Monterey Plus Draft EIR is incorporated by reference in this EIR.

Flexible Storage Accounts. One of CLWA's Flexible Storage Accounts described in its 2005 UWMP permits it to store up to 4,684 af in Castaic Lake. Any of this amount that CLWA withdraws must be replaced by CLWA within five years of its withdrawal. CLWA manages this storage by keeping the account full in normal and wet years and then delivering that stored amount (or portions of it) during dry periods. The account is refilled during the next year that adequate SWP supplies are available to CLWA to do so. CLWA also has recently negotiated with Ventura County water agencies to obtain the use of its Flexible Storage Account. This will allow CLWA access to another 1,376 af of storage in Castaic Lake. CLWA's access to this additional storage is available on a year-to-year basis for 10 years, beginning in 2006.

Yuba County Water Agency Transfer Agreement. One of CLWA's Flexible Storage Accounts described in its 2005 UWMP permits it to store up to 4,684 af in Castaic Lake. Any of this amount that CLWA withdraws must be replaced by CLWA within five years of its withdrawal. CLWA manages this storage by keeping the account full in normal and wet years and then delivering that stored amount (or portions of it) during dry periods. The account is refilled during the next year that adequate SWP supplies are available to CLWA to do so. CLWA also has recently negotiated with Ventura County water agencies to obtain the use of its Flexible Storage Account. This will allow CLWA access to another 1,376 af of storage in Castaic Lake. CLWA's access to this additional storage is available on a year-to-year basis for 10 years, beginning in 2006. Approximately 850 af of non-SWP water supply is available to CLWA in critically dry years as a result of DWR entering into agreements with the Yuba County Water Agency (YCWA) and the Bureau of Reclamation (Reclamation) related to settlement of water rights issues on the Lower Yuba River (Yuba Accord). Additional supplies could be available to CLWA in wetter years. The quantity of water would vary depending upon hydrology and the extent of participation by other SWP contractors. For purposes of analysis, however, and based on CLWA entering into a water transfer agreement with YCWA, CLWA has projected that approximately 850 af of water would be available to CLWA under the Yuba Accord in a critically dry year.

Semitropic Water Storage District Banking. The 2005 UWMP identifies two existing contracts with the Semitropic Water Storage District under which CLWA has stored 59,000 acre-feet of water. (2005 UWMP, p. 3-22.) In accordance with the terms of CLWA's storage agreements with Semitropic, 90 percent of the banked amount, or a total of 50,870 af, is recoverable through 2012-2013 to meet CLWA water demands when needed. CLWA's approval of one of the contracts (for the 2002 banking program) was challenged in California Water Network v. Castaic Lake Water Agency, Ventura Superior Court Case No. CIV 215327. The trial court entered judgment in favor of CLWA. This ruling was appealed. All issues regarding the 2002 banking program with Semitropic were conclusively resolved in favor of CLWA in June 2006. In 2009 and 2010, CLWA withdrew a total of 4,950 af from its Semitropic programs.

Rosedale-Rio Bravo Water Banking. The 2005 UWMP identifies one existing contract with the Rosedale-Rio Bravo Water Storage District under which CLWA has 64,898 af of recoverable water as of December 31, 2007. (2005 UWMP, p. 3-23.) This banking program currently offers storage and pump-back capacity of 20,000 afy, with up to 100,000 af of storage capacity. This stored water will be called upon to meet demands when required and is recoverable through 2035.

Newhall Land - Semitropic Water Storage District Banking. The Newhall Land and Farming Company has entered into an agreement to reserve and purchase water storage capacity of up to 55,000 af in the Semitropic Water Storage District Groundwater Banking Project (Newhall Ranch Revised Additional Analysis [Volume VIII, May 2003]). Sources of water that could be stored include, but are not limited to, the Nickel Water. The stored water could be extracted in dry years in amounts up to 4,950 afy. There is 18,828 af of water stored in the Semitropic Groundwater Storage Bank by the Specific Plan applicant for the Specific Plan. Newhall Ranch is located within the CLWA service area. Delivery of stored water from the Newhall Semitropic Groundwater Bank requires further agreements between CLWA and the Specific Plan applicant. However, the Nickel water would only be needed on the Specific Plan site in years when all of the Newhall agricultural water has been used, which is estimated to occur after the 21st year of project construction. As a result, there is more than ample time for CLWA and the applicant to arrive at the necessary delivery arrangements and related agreements.

The 2005 UWMP also discusses water banking storage and pumpback capacity both north and south of CLWA's service area, the latter of which would provide an emergency supply in case of catastrophic outage along the California Aqueduct. With short-term storage now in place in the Semitropic banking program and long-term storage now existing with Rosedale-Rio Bravo, CLWA is assessing southern water banking opportunities. Such banking programs enhance the reliability of both existing and planned future water supplies in the Santa Clarita Valley. As shown on **Tables 4.10-13** and **4.10-14**, CLWA's additional planned banking supplies are anticipated to be 20,000 acre-feet by 2014.

CLWA Recycled Water. As shown on **Tables 4.10-11** through **4.10-14**, above, since 2003, existing local supplies have been augmented by the initiation of recycled water deliveries from CLWA's recycled water program. CLWA currently has a contract with the Los Angeles County Sanitation District for 1,700 afy of recycled water. This supply is available in an average/normal year, a single-dry year, and in each year of a multiple-dry year period. In 2009, recycled water deliveries were 328 af, generally consistent with recycled water deliveries that have ranged between 311 and 470 afy over the past six years. In addition, in the 2005 UWMP, CLWA projects an increase of 15,700 afy in recycled water by 2030. Similar to the existing recycle water supply, the 15,700 afy of planned recycled water supply is to be available in an average/normal year, a single-dry year, and in each year of a multiple-dry year period. There is also a new phase of the of the recycled water system in design that would extend the existing system southward from the intersection of Magic Mountain Parkway and the Old Road to the intersection of Orchard Village Road and Lyons Avenue, serving large irrigation customers along its proposed alignment. Collectively, these phases will have design capacity to increase recycled water deliveries by about 1,500 afy.

As the Newhall Ranch Specific Plan is developed, recycled water also will be available to the Specific Plan from the Newhall Ranch WRP. Water from the Newhall Ranch WRP would be used to meet the non-potable demands of the Specific Plan. Areas that would use recycled water include common areas, slopes, landscaped areas, and parks.

CLWA Service Area Water Demand. Table 4.10-15 shows CLWA's 2005 and projected water demands based on the 2005 UWMP. CLWA's demands vary from year-to-year depending on local hydrologic and meteorologic conditions, with demands generally increasing in years of below average local precipitation and decreasing in years of above average local precipitation.

Table 4.10-15
CLWA's Projected Water Demands

	Demand (af)				
	2010	2015	2020	2025	2030
All Purveyors ¹	86,100	97,100	106,500	119,400	129,300
Agricultural/Private Uses	13,950	12,300	10,650	9,000	9,000
Demand w/o Conservation	100,050	109,400	117,150	128,400	138,300
Conservation at 10% ²	-8,610	-9,710	-10,650	-11,940	-12,930
Total Demand (w/ 10% conservation)	91,440	99,690	106,500	116,460	125,370

Notes:

¹ Purveyors refer to CLWA SCWD, NCWD, VWC, and Los Angeles County Waterworks District No. 36.

² A 10 percent reduction on the urban portion of the normal year demand is estimated to result from conservation BMPs. Not shown is a 10 percent per capita reduction in urban demand by 2015 and a 20 percent per capita reduction now mandated by ~~SB 757~~ SB 7X7.

Source: CLWA (October 2008)

In 2001, CLWA signed the Memorandum of Understanding Regarding Urban Water Conservation in California (MOU) on behalf of the CLWA service area. By signing the MOU, CLWA became a member of the California Urban Water Conservation Council (CUWCC) and pledged to implement all cost-effective Best Management Practices (BMPs) for water conservation. CLWA has estimated that conservation measures within the service area can reduce the urban demand water demand by 10 percent. The BMPs include:

- System Water Audits, Leak Detection and Repair; Public Information Programs; School Education Programs;
- Wholesale Agency Programs;
- Conservation Pricing;
- Water Conservation Coordinator;
- Water survey programs for single-family residential and multi-family residential customers;
- System water audits, leak detection and repair;
- Metering with commodity rates for all new connections and retrofit of existing connections;
- Large landscape conservation programs and incentives;

- High-efficiency clothes washing machine financial incentive programs;
- Conservation programs for commercial, industrial, and institutional (CII) accounts; and
- Water waste prohibition.

An additional 10 percent urban demand reduction would result from the recently approved ~~SB 752~~ SB 7XZ, which requires a 20 percent reduction in per capita urban demand by 2020.

(2) Litigation Effects on Availability of Imported Water

For the past few years, there have been a series of litigation challenges concerning imported water supplies in the Santa Clarita Valley. The litigation challenges have given rise to claims that there is uncertainty regarding the availability and reliability of imported SWP water supplies in the Santa Clarita Valley.

The purpose of this section is to disclose these litigation challenges and their effects on the availability and reliability of imported water supplies in the Santa Clarita Valley. In summary, as discussed below, it has been determined, based on substantial evidence in the record, that the litigation challenges are not likely to affect the short-term or long-term availability or reliability of imported water supplies as projected in the 2005 UWMP and other reports, studies, and documents cited in this EIR.

(a) Litigation Concerning CEQA Review of the Monterey Agreement

In *Planning and Conservation League v. Department of Water Resources* (2003) 83 Cal.App.4th 892, the Court of Appeal, Third Appellate District, decertified an EIR prepared by the Central Coast Water Agency (CCWA) to address the "Monterey Agreement." The Monterey Agreement was a statement of principles to be incorporated into an omnibus amendment of the long-term contracts between the DWR and water contractors governing the supply of water under the SWP. The Monterey Agreement was the culmination of negotiations between DWR and most of the 29 SWP Contractors to settle disputes arising out of the allocation of water during times of shortage. Twenty-seven of the 29 SWP Contractors executed the Monterey Amendments to their water supply contracts in 1996. The Monterey Agreement contemplated revisions in the methodology of allocating water among contractors and provided a mechanism for the permanent transfer of Table A water amounts from one contractor to another. The Monterey Agreement was implemented by the execution of legally binding contracts with DWR (Monterey Amendments).

As stated above, although the court set aside the Monterey EIR prepared by CCWA, it did not set aside, invalidate, or otherwise vacate the Monterey Agreement or the Monterey Amendments. No court has ordered any stay or suspension of the Monterey Agreement pending certification of a new EIR. DWR and the SWP Contractors continue to abide by the Monterey Agreements, as implemented by the Amendments, as the operating framework for the SWP, while the new EIR is undertaken.

Following decertification of the original Monterey EIR, the PCL litigants entered into the Monterey Settlement Agreement in 2003, designating DWR as the lead agency for preparation of the new EIR to address the Monterey Agreement (entitled the “Monterey Plus EIR”). In October 2007, DWR completed the Draft EIR analyzing the Monterey Amendments to the SWP contracts, including Kern water bank transfers and associated actions as part of the Monterey Settlement Agreement (Monterey Plus Draft EIR; SCH No. 2003011118). The Draft EIR addresses the significant environmental impacts of changes to the SWP operations that are a consequence of the Monterey Amendments and the Monterey Settlement Agreement. It also discusses the project alternatives, growth inducement, water supply reliability, as well as potential areas of controversy and concern. DWR certified the Monterey Plus Final EIR on February 1, 2010.

The Monterey Settlement Agreement also facilitated certain water transfers between contracting agencies, including CLWA's 41,000 af water transfer agreement (discussed further below). The 41,000 af transfer has been recognized as a permanent transfer by DWR, but it was subject to then pending litigation in Los Angeles Superior Court challenging the EIR prepared for that transfer. (*Friends of the Santa Clarita River v. Castaic Lake Water Agency*, see discussion below.) DWR's new Draft EIR analyzed the potential environmental effects relating to the Monterey transfers, including a focused analysis of the 41,000 af transfer, which is provided as part of a broader analysis of permanent transfers of Table A Amounts.

(b) Litigation Concerning CEQA Review of the 41,000 af Transfer

Over the past several years, opposition groups have claimed that a part of CLWA's SWP supplies, specifically, a 41,000 af transfer, should not be included or relied upon because it is not final and is the subject of litigation. It was asserted that litigation challenges to the 41,000 af transfer create uncertainty regarding the availability and reliability of such water for the Santa Clarita Valley. Other comments have claimed that DWR's preparation of a new Monterey Agreement EIR also introduced an element of potential uncertainty regarding the availability and reliability of the 41,000 af transfer. These comments have included claims that the subsequent Monterey Settlement Agreement precluded CLWA from using or relying upon the 41,000 af transfer until DWR has completed and certified the new Monterey Agreement EIR. As explained below, a recent published appellate court decision has resolved these claims in favor of the availability, reliability, and use of CLWA's 41,000 af transfer.

In *Santa Clarita Organization for Planning the Environment v. County of Los Angeles* (2007) 157 Cal.App.4th 149 (*SCOPE II*), the Second District Court of Appeal, Division Six, affirmed the trial court's decision upholding the validity of the EIR's water supply analysis for the West Creek development project in the Santa Clarita Valley, including the EIR's assessment and reliance upon the permanent and final 41,000 af water transfer. In applying the four principles for a CEQA analysis of future water supplies articulated by the California Supreme Court in *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova*

Similarly, the Court of Appeal rejected the claim that the 2004 EIR failed to disclose the potential for DWR's future Monterey Plus EIR to change the transfer's underlying assumptions, including the potential impact of implementing the transfer under the pre-Monterey Agreement contractual regime. The appellate court found that the 2004 EIR properly analyzed "the three scenarios relevant to the transfer, and evaluate[d] the actual water supplies available under the scenarios." The Court of Appeal also disagreed with the claim that the 2004 EIR was required to assess the possibility that CLWA would not acquire the rights to the 41,000 acre-feet of water under the pre-Monterey Agreement contractual regime as a "no project" alternative. It found that the EIR's "no project" alternative assuming the absence of the transfer was sufficient because the Monterey Amendment is a *separate* project.

Finally, on the cross-appeal, the Court of Appeal reversed the trial court's finding that the 2004 EIR contained an "analytical hole." The Court of Appeal concluded that the 2004 EIR is not subject to the challenge on the grounds found by the trial court because the petitioners failed to assert the issue prior to the trial court's ruling. The Court of Appeal also held that the petitioners failed to exhaust their administrative remedies by not raising the issue at the trial court level. In addition, the appellate court upheld the 2004 EIR on the merits, finding the 2004 EIR adequately explained that the delivery scenarios were related to the possible outcomes of DWR's pending Monterey Plus EIR, relying on the established CEQA doctrine that absolute perfection is not required in an EIR.

On January 26, 2010, PCL and CWIN filed a petition for review with the California Supreme Court in the PCL v. CLWA litigation. On March 10, 2010, the California Supreme Court (En Banc) denied the petitioners' petition for review and their request to depublish the Court of Appeal decision. Litigation on the transfer to CLWA has now been fully and finally resolved in favor of CLWA.

~~In its cross appeal, CLWA argued that the petitioners should be prevented by the doctrine of res judicata from litigating the case. The Court of Appeal did not rule in CLWA's favor on this issue; however, this portion of the decision did not affect the appellate court's conclusion that the 2004 EIR contained no material defects.~~

(3) Summary of the County's Conclusions About Effect of Litigation on Sufficiency of Water Supplies

Based on the above analysis, this EIR acknowledges that multiple court challenges have been filed in the past challenging the sufficiency of water supplies. Based on the status of these challenges, ~~their likely outcome,~~ and the fact that no court has yet set aside any of the water transfers or other physical activities approved under any of the challenged documents, substantial evidence exists in this EIR and record to support the conclusions in the 2005 UWMP, the ~~2008 Water Report~~ 2009 Water Report, and the Revised Landmark WSA that there is sufficient water to serve the proposed Landmark Village project and, because the project relies only on local groundwater and recycled water to meet its potable and non-potable water demands, it will not use or rely upon CLWA's SWP supplies. As a result, the Landmark Village project will not contribute to any significant cumulative impacts on Santa Clarita Valley's water supplies.

(4) Summary of Past and Current Drought Conditions

In February 2008, Governor Arnold Schwarzenegger asked the Legislature for a plan to achieve a 20 percent reduction in per capita water use statewide by 2020, explaining that conservation is one of the key ways to provide water for Californians and to protect and improve the Delta ecosystem. In June 2008, after two consecutive years of below-average rainfall, low snowmelt runoff, and court-ordered water transfer restrictions, Governor Schwarzenegger announced a statewide drought and issued an Executive Order (S-06-08), which takes immediate action to address current drought conditions. The Executive Order directed DWR to, among other things: (1) facilitate water transfers to respond to shortages across the state due to drought conditions; (2) work with local water districts and agencies to improve local coordination; and (3) expedite existing grant programs to assist local water districts and agencies. The Executive Order also encourages local water districts and agencies to promote water conservation. Specifically, they ~~are~~ were encouraged to work cooperatively on the regional and state level to take immediate action to reduce water consumption locally and regionally for the remainder of 2008 and prepare for potential worsening drought conditions in 2009 (While DWR has indicated that drought conditions have not ended, the 2009/2010 water year had a higher than normal amount of precipitation and snowfall across the state).

In response to the Governor's Executive Order, DWR ~~is implementing~~ implemented a number of actions to address the 2008/2009 drought conditions. For example, to help facilitate the exchange of water throughout the state, DWR ~~has~~ established a 2009 Drought Water Bank. To implement the 2009 Drought Water Bank, DWR ~~will~~ purchased water from willing sellers, primarily from water suppliers, upstream of the Sacramento-San Joaquin Delta. This water ~~will be~~ was transferred using SWP or CVP facilities to water suppliers that are at risk of experiencing water shortages in 2009 due to drought conditions and that require supplemental water supplies to meet anticipated demands. Please refer to DWR's Web site, http://www.water.ca.gov/drought/docs/2009drought_actions.pdf (accessed December 8, 2008) for further information about the ~~2008/2009~~ drought conditions and DWR's response to those conditions.

Also in response to the Governor's Executive Order, in June 2008, the Metropolitan Water District of Southern California (MWD) issued a "Water Supply Alert" in Southern California urging local agencies to aggressively pursue conservation measures. On August 5, 2008, the County Board of Supervisors approved a resolution declaring a County-wide "water supply and conservation alert." The Board's resolution, among other things, urged intensification of water conservation efforts to achieve a 15 to 20 percent reduction in overall demand; requested local water purveyors and cities to accelerate and intensify public outreach campaigns to communicate the need for water conservation to the general public; and urged cities to update and adopt water wasting ordinances and prepare for enforcement of the ordinances, if necessary. The actions at the state, regional, and local level are likely to result in future regulatory action to strengthen the existing framework for water conservation.

Beginning with the first Strategic Growth Plan in 2006, the Governor called for a comprehensive plan to address California's water needs. The Governor renewed that call in his 2008-09 budget by proposing an

~~In accordance with the~~ ~~The proclamation,~~ ~~also directs that by March 30, 2009,~~ ~~DWR must provided~~ an updated report on the state's drought conditions and water availability. ~~Also A~~ According to the proclamation, if the emergency conditions have not been sufficiently mitigated, the Governor will consider additional steps. These could include the institute of mandatory water rationing and mandatory reductions in water use; reoperation of major reservoirs in the state to minimize impacts of the drought; additional regulatory relief or permit streamlining as allowed under the Emergency Services Act; and other actions necessary to prevent, remedy, or mitigate the effects of the extreme drought conditions.

DWR and California's Department of Food and Agriculture ~~will also recommended,~~ ~~within 30 days,~~ measures to reduce the economic impacts of the drought, including but not limited to water transfers, through-Delta emergency transfers, water conservation measures, efficient irrigation practices, and improvements to the California Irrigation Management Information System.

~~The current d~~ Drought conditions present significant short-term challenges to the provision of water supplies locally and statewide. Nonetheless, the current drought conditions are part of the historic and ongoing hydrologic cycle that occurs in California and CLWA and local retail purveyors have developed various contingencies in order to minimize short-term impacts on water supplies due to drought conditions. Such actions include voluntary/mandatory conservation measures, public outreach programs promoting efficient water use and conservation, water transfers, and use of "banked" water supplies, if necessary to meet demands in drought conditions.

However, the Revised Landmark Village WSA and this water analysis assess overall water supply availability and reliability over the long-term (i.e., the 20-year horizon called for by the Urban Water Management Planning Act), and include the effect of normal/average, dry, and multi-dry weather years from the historic record as modified for potential climate change impacts in reliance on DWR modeling estimates. (See 2009 DWR *Delivery Reliability Report*) Based on that information, the Revised Landmark Village WSA, ~~2008 Water Report~~ 2009 Water Report, and this analysis conclude that there is adequate water supplies for the proposed Landmark Village project, in addition to the existing and planned uses in the Santa Clarita Valley with conservation levels at 10 percent.

7. PROJECT IMPACTS

a. Significance Threshold Criteria

The criteria listed below are based on Appendix G of the *State CEQA Guidelines*. The proposed Landmark Village project would normally have a significant impact on water resources if it would:

- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted); or
- Have insufficient water supplies available to serve the project from existing entitlements and resources, or new or expanded entitlements are needed.
- According to the County of Los Angeles Environmental Document Reporting Procedures and Guidelines, the County also requires an analysis of adverse impacts on water availability when a project cannot be served by the existing area water system facilities due to inadequate water supplies to meet the domestic demands, and/or fire flows for fire protection.

In addition to the above criteria, and given the presence of ammonium perchlorate created by other land uses in the Santa Clarita Valley, impacts to water resources would be significant if implementation of the proposed project would:

- Result in the spreading of perchlorate in groundwater beyond the wells currently affected by perchlorate.

b. Environmental Impacts Associated With The Landmark Village Water Supplies

Water Supply Impacts. As stated above, and as shown in the Revised Landmark WSA, an adequate supply of water is available to meet the demands of the Landmark Village project. The supply available to meet the proposed project's potable demand is the applicant's groundwater supplies from the Alluvial aquifer, which is presently used for agricultural uses. The amount of water historically and presently available from this source is approximately 7,038 afy. As stated above, due to the County's imposition of Specific Plan Mitigation Measure SP 4.11-15, there cannot be a net increase in groundwater usage due to the conversion of agricultural water to potable supply uses for the project site. The project's non-potable demand will be met by recycled water from the Newhall Ranch WRP or, alternatively from the existing Valencia WRP, upstream from the project site. As shown above, the proposed project's potable water demand is estimated to be 608 afy. The water from the Alluvial aquifer presently ~~used~~ used for agriculture would be used to meet all of the project's potable water needs resulting in no net increase in groundwater use due to the proposed project. Because the applicant is utilizing water supplies from independent

sources, the proposed project does not result in or contribute to any significant cumulative water supply impacts in the Santa Clarita Valley. As documented further below in the section assessing the Landmark Village water demand and supplies, sufficient water supplies are available to serve the proposed project from existing supplies without creating the need for any new or expanded water entitlements or facilities. As a result, the available water supplies also are sufficient to meet the domestic demands and fire flows for the proposed Landmark Village project.

Although the Revised Landmark WSA and this analysis have determined that adequate and reliable water supplies exist to serve the Landmark Village project, in addition to other existing and planned uses in the Santa Clarita Valley, the current 2008/2009 drought conditions illustrate the need for improved water efficiency and conservation. The recently-passed legislation (~~SB 752~~ SB 7X7) also requires urban water users to reduce water use by 10 percent per capita by 2015 and 20 percent by 2020. As a result, this EIR recommends that the water efficiency and conservation measures of CLWA and the local retail purveyors be incorporated as conditions of approval for land use projects approved by the County of Los Angeles.

Groundwater Supply Impacts. Supplying water to the Landmark Village project also would not substantially deplete groundwater supplies, because the previous discussion in this EIR of available local groundwater supplies confirms that there are sufficient local groundwater supplies to support the planned land uses of the Landmark Village project site, in addition to existing and future cumulative development in the valley. As stated above, groundwater supplies were evaluated in the 2005 UWMP, the 2005 *Basin Yield Report*, and the 2009 *Basin Yield Update*. These evaluations resulted in the following findings: (a) both the Alluvial aquifer and the Saugus Formation are reasonable and sustainable sources of local water supplies at the yields stated in the 2005 UWMP over the next 25 years; (b) the yields are not overstated and will not deplete or “dry-up” the groundwater basin; and (c) there is no need to reduce the yields for purposes of planning, as shown in the 2005 UWMP, the 2005 *Basin Yield Report* and the 2009 *Basin Yield Update* (see Recirculated Draft EIR **Appendix 4.10**, for the 2005 UWMP, the 2005 *Basin Yield Report* and the 2009 *Basin Yield Update*). In addition, the 2005 UWMP, 2005 *Basin Yield Report*, and the 2009 *Basin Yield Update* determined that neither the Alluvial aquifer nor the Saugus Formation is in an overdraft condition, or projected to become overdrafted.

Groundwater Recharge Impacts. The supplying of water to the Landmark Village project also would not interfere substantially with groundwater recharge, because the best available evidence shows that no adverse impacts to the recharge of the Basin have occurred due to the existing or projected use of local groundwater supplies, consistent with the CLWA/purveyor groundwater operating plan for the Basin (see Recirculated Draft EIR **Appendix 4.10** [2005 *Basin Yield Report* and 2009 *Basin Yield Update*]). In addition, based on the memorandum prepared by CH2MHill (*Effect of Urbanization on Aquifer Recharge in the Santa Clarita Valley*, February 22, 2004; Recirculated Draft EIR **Appendix 4.10**), no significant project-

completion (i.e., restoration of all impacted capacity) in 2010. Notable accomplishments toward implementation include completion of the Final Interim Remedial Action Plan (RAP) and associated environmental review with the adoption of a Mitigated Negative Declaration in September 2005, and various implementation activities from 2007-2009. Completion of the CLWA containment plan is expected in June 2010.

In light of the preceding, as to the adequacy of groundwater as the local component of water supply for the Santa Clarita Valley, the impacted capacity of the three wells will remain unavailable through 2009, during which time the non-impacted groundwater supply will be sufficient to meet near-term water requirements as described above. ~~Thereafter,~~ With the restoration of the wells, the total groundwater capacity will be sufficient to meet the full range of normal and dry-year conditions as provided in the CLWA/retail water purveyor groundwater operating plan for the Basin.

Returning the remaining three contaminated Saugus wells to municipal water supply service requires issuance of permits from DPH before the water can be considered potable and safe for delivery to customers. The permit requirements are contained in DPH Policy Memo 97-005 for direct domestic use of impaired water sources.

Before issuing a permit to a water utility for use of an impaired source as part of the utility's overall water supply permit, DPH requires that studies and engineering work be performed to demonstrate that pumping the wells and treating the water will be protective of public health for users of the water. The 97-005 Policy Memo requires that DPH review the local retail water purveyor's plan, establish appropriate permit conditions for the wells and treatment system, and provide overall approval of returning the impacted wells to service for potable use. Ultimately, the CLWA/local retail water purveyor plan and the DPH requirements are intended to ensure that the water introduced to the potable water distribution system has no detectable concentration of perchlorate.

The DPH 97-005 Policy Memo requires, among other things, the completion of a source water assessment for the impacted wells intended to be returned to service. The purpose of the assessment is to determine the extent to which the aquifer is vulnerable to continued migration of perchlorate and other contaminants of interest from the Whittaker-Bermite site. The assessment includes the following:

- Delineation of the groundwater capture zone caused by operating the impacted wells
- Identification of contaminants found in the groundwater at or near the impacted wells
- Identification of chemicals or contaminants used or generated at the Whittaker-Bermite facility
- Determination of the vulnerability of pumping the impacted wells to these contaminant sources

agricultural water to potable supply uses for the Landmark Village project site (see Specific Plan Mitigation Measure 4.11-15); (b) the agricultural groundwater used to meet the needs of the Landmark Village project site must meet the drinking water quality standards required by law prior to use (see Specific Plan Mitigation Measure 4.11-16); and (c) the wells expected to serve the Landmark Village project site are located within the Specific Plan site, or very near the site at the Valencia Commerce Center; the wells are not impacted by perchlorate based on laboratory test results; and they are located over 4 miles west of the former Whittaker-Bermite site.

Landmark Village Water Demand Impacts. The Landmark Village project site is presently used for crop production and cattle grazing. A variety of crops are produced on the site, including alfalfa and vegetables. The project site has been farmed for many decades. The project applicant, Newhall Land, owns and operates agricultural wells in Los Angeles County. Total production from Newhall's agricultural wells is annually reported to the State Water Resources Control Board. Furthermore, the total amount of Newhall's agricultural water production is reported in the annual Santa Clarita Valley water reports, which address the years 1997 through ~~2009~~2008.⁵¹

The average annual amount of water that has been pumped and used for Newhall's agricultural operations in Los Angeles County from 1996 to 2000 is approximately 7,038 afy. The agricultural land on the Landmark Village site ultimately would be taken out of farming production as it is converted to non-agricultural project land uses. Since the water is already used to support Newhall's agricultural uses, there are not expected to be any significant adverse effects resulting from the use of this water to meet the potable demands of the Landmark Village project, which is part of the approved Newhall Ranch Specific Plan area. In addition, due to project conditions, the amount of groundwater that will be used to meet the potable demands of the Newhall Ranch Specific Plan, including the Landmark Village project, cannot exceed the amount of water historically and presently used by the applicant for agricultural uses (see Specific Plan Mitigation Measure 4.11-15). Therefore, no net increase in groundwater use will occur with implementation of the Specific Plan, including the proposed Landmark Village project.

At present, the Landmark Village project site contains 373 acres of irrigated agricultural land, which results in the use of an average of approximately ~~2,940~~3,242 acre-feet of water per year on the Landmark Village site. In addition, approximately 141 afy of water is used on the Newhall Ranch WRP site (both amounts (2,940 afy+141 afy=3,081 afy) part of the 7,038 afy of groundwater used by Newhall for agricultural irrigation). As the ~~project sites are~~ is converted to Specific Plan uses, this amount of water would be available for use on the Newhall Ranch Specific Plan site, including the Landmark Village and

51 As part of the Newhall Ranch Specific Plan mitigation program, annual water reports have been prepared and submitted to the County of Los Angeles and the City of Santa Clarita for several years. The 1998 through 2009~~8~~ Santa Clarita Valley water reports are available for public review and inspection at the County of Los Angeles, Department of Regional Planning, Sam Dea, 320 W. Temple Street, Room 1346, Los Angeles, California 90012 (213) 974-6467, and are incorporated by reference.

WRP projectsites. The potable water demand for Landmark Village (including the demand of the WRP) is approximately 608 afy, leaving approximately 2,473,634 afy of water from the Landmark Village site (including the WRP site) available for other portions of the Specific Plan (i.e., 3,0813,242 afy used on the Landmark Village and WRP sites for agriculture minus Landmark and WRP potable demand of 608 afy leaves 2,473,634 afy available for use on Specific Plan site). The project water demand is summarized in Table 4.10-16, Summary of Landmark Village Water Demand.

Table 4.10-16
Summary of Landmark Village Water Demand (acre-feet)

Land Use	Water Demand	
	Potable	Non-Potable
Residential Development		
Medium	240	
High	299	51
Subtotals	539	51
Nonresidential Development		
Mixed-Use Commercial	26	29
Retail	23	7
Office	2	3
<u>Water Reclamation Plant</u>	<u>8</u>	<u>13</u>
<u>Fire Station</u>	<u>4</u>	<u>2</u>
Schools	3	13
Subtotals	66	67
Open Space and Parks		
Recreation		
Community Parks	1	18
Neighborhood Parks	2	46
Major Open Areas		
Community Slopes	0	182
Subtotals	3	246
Totals	608	364
Total Water Demand		972¹

Notes:

¹ This represents the project water demand in a normal/average year. In a dry year, the project's total water demand is anticipated to increase by 10 percent (1,069 afy), because of water demand increases under dry year conditions. Not shown is a 10 percent per capita reduction in urban demand by 2015 and a 20 percent per capita reduction in urban demand by 2020 now mandated by ~~SB 7~~SB 7X7.

The remaining portion of this section identifies the water sources that will be available to meet the water demand generated by buildout of the Landmark Village project.

Landmark Village Water Supply Impacts. As discussed above, the projected total water demand for the Landmark Village project is 972 afy in a normal/average year. Project water demand increases by approximately 10 percent in a dry year to a total of 1,069 afy. To meet this demand, Valencia Water Company, as the local retail purveyor, would provide water to the Landmark Village project. Water sources expected to serve the Landmark Village project are the applicant's agricultural water from the Alluvial aquifer, which would be treated and used to meet the project's potable demand, and recycled water from the Newhall Ranch WRP (or the existing Valencia WRP), which would be used to meet the project's non-potable demand. These water supplies are assessed further below.

(3) Non-Potable Supplies

(a) Newhall Ranch Recycled Water

A total of 364 afy of recycled water would be needed to serve the Landmark Village project site, including the WRP. Recycled water from the proposed Newhall Ranch WRP would be used to meet the non-potable water demands of the Landmark Village project. The recycled water from the Newhall Ranch WRP would be used on the project for irrigation of common areas, slopes and other landscaped areas. The availability of this source would occur in stages, mirroring the staged construction of the Newhall Ranch WRP. Construction of the Newhall Ranch WRP is expected to be staged as demand for treatment increases with implementation of the Newhall Ranch Specific Plan.

Since approval of the Specific Plan by Los Angeles County on May 27, 2003, the Los Angeles County Local Agency Formation Commission (LAFCO) completed formation of the Newhall Ranch County Sanitation District. The new County sanitation district was formed effective July 27, 2006.

In addition, on September 6, 2007, the Regional Water Quality Control Board, Los Angeles Region, approved Order No. R4-2007-0046, NPDES Permit No. CA0064556, effective October 27, 2007. This Order serves as the NPDES Permit for point source discharges from the Newhall Ranch WRP, pursuant to section 402 of the federal Clean Water Act and chapter 5.5, division 7 of the California Water Code. The Order also serves as the Waste Discharge Requirements for the new County Sanitation District with respect to discharges to the Santa Clara River, pursuant to article 4, chapter 4, of the California Water Code. Specifically, the Order specifies limitations and discharge requirements for the Newhall Ranch WRP, including discharge prohibitions, technology-based and water quality-based effluent limitations, receiving water limitations, and other provisions such as monitoring and reporting requirements.

Construction of the Newhall Ranch WRP will require outfall construction and other facilities in and near the Santa Clara River. As a result, the applicant has requested a Section 404 Permit from the Corps and a Master Lake/Streambed Alteration Agreement from CDFG in order to obtain the federal and state permitting for such facilities.

(4) CLWA Recycled Water

If the Newhall Ranch WRP is not operating at the time of Landmark Village project occupancy, the non-potable water demand of the Landmark Village project would be met through the use of recycled water from the existing Valencia WRP, located upstream of the Landmark Village project site. CLWA would temporarily serve the project site with recycled water from the existing Valencia WRP. Ultimately, however, all recycled water needed on the Landmark Village site would be provided by the Newhall Ranch WRP.

(5) Potable Supplies

(a) Newhall Agricultural Water

The project applicant would meet all of the potable water demands of the Landmark Village project by using the water from the Alluvial aquifer that the applicant historically and presently uses for agricultural irrigation purposes on its land in Los Angeles County. No additional water would be pumped; instead, the water presently used to irrigate crops would be pumped from sanitary-sealed municipal supply wells (as compared to open-air agricultural wells), treated at the wellhead to meet Title 22 drinking water standards, and then used to meet the project's potable demand, as agricultural areas are taken out of production. The total amount of water previously and presently used for agriculture that is available to the Newhall Ranch Specific Plan is approximately 7,038 afy in both average and dry years. The Landmark Village project, -including the Newhall Ranch WRP, would use approximately 608 of the 7,038 afy to meet its potable water demand.

The agricultural land would ultimately be taken out of farming production as it is converted to non-agricultural Specific Plan land uses. (The applicant is required to provide a report to Los Angeles County the property or properties taken out of agricultural production in order to provide the needed water for that tract; see Specific Plan Mitigation Measure 4.11-22.) Since the water is already used to support Newhall's agricultural uses, there are not expected to be any significant environmental effects resulting from the water being used to meet the potable demands of the Landmark Village project. Based on the previously adopted mitigation by Los Angeles County, the amount of groundwater that would be used to serve the potable demands of the Specific Plan, including Landmark Village, cannot exceed 7,038 afy.

Impacts Assessment of Existing Conditions Plus Project Water Demand and Supply. This section describes the existing development demand in the Santa Clarita Valley, plus the project water demand, measured against existing supplies. **Table 4.10-17, Existing Plus Project Demand and Supply for the Santa Clarita Valley**, illustrates that existing supplies exceed project demand, in conjunction with existing demand in the Santa Clarita Valley.

**Table 4.10-17
Existing Plus Project Demand and Supply for the Santa Clarita Valley**

2009 8 Demand	(acre-feet)	
2009 8 Demand (Actual) ¹	<u>86,538</u> 90,700	
Landmark Village Demand	972	
Total Existing Plus Project Demand		91,672 <u>87,510</u>
Available 2008 Supplies		
Local Groundwater ²		
Alluvial aquifer	<u>39,986</u> 41,750	
Saugus Formation	<u>7,678</u> 6,950	
Subtotal Local Groundwater		48,700 <u>47,664</u>
Imported Supplies		
Table A Amount ³	<u>33,320</u> 38,080	
Net Carryover from 2007 ⁴	<u>10,107</u> 12,146	
Buena Vista/Rosedale-Rio Bravo ⁵	11,000	
Yuba Accord	<u>1,658</u> 1,022	
Flexible Storage Account (CLWA) ⁶	0	
Flexible Storage Account (Ventura County) ⁷	0	
<u>2009 Turnback Pool Water</u>	<u>52</u>	
<u>Semitropic Water Banking and Exchange Program</u> ¹²	<u>1,650</u>	
Nickel Water -- Newhall Land	1,607	
Subtotal Imported Supplies		68,657 <u>59,095</u>
Recycled Water	<u>328</u> 311	311 <u>328</u>
Total Available 2008 Supplies		108,106

2009 8 Demand	(acre-feet)	
Additional Dry-Year Supplies⁸		
Semitropic Water Bank		<u>45,920</u>
2002 Account ⁹	<u>16,650</u>	<u>21,600</u>
2003 Account ⁹	29,270	
Rosedale-Rio Bravo Banking and Exchange Program		<u>20,000</u>
2005 Banking of Table A¹⁰	17,800	
2006 Banking of Table A¹⁰	17,800	
2007 Banking of Table A¹⁰	7,300	
2005-2006 Buena Vista/Rosedale-Rio Bravo Water Acquisition Agreement and Banking of Table A in 2005-2007 ^{10 11}	<u>20,000</u>	<u>22,000</u>
Semitropic Water Bank -- Newhall Land ¹²	<u>3,300</u>	<u>4,950</u>
Total Additional 20098 Dry-Year Supplies		<u>69,220</u> <u>120,720</u>

Notes:

¹ See ~~2008 Water Report~~2009 Water Report, p. ES-1 (April 2009/May 2010).

² See ~~2008 Water Report~~2009 Water Report, pp. ES-1 - ES-2 (April 2009/May 2010).

³ CLWA's SWP Table A Amount is 95,200 af. The final 2009~~8~~ allocation was ~~40.35%~~, or ~~38,080~~33,320 af.

⁴ Amount used by CLWA in 2009~~8~~.

⁵ 2008 annual supply from Buena Vista/Rosedale-Rio Bravo Water Acquisition Agreement.

⁶ CLWA can directly utilize up to 4,684 af of storage capacity in Castaic Lake.

⁷ By agreement in 2005, CLWA can also utilize 1,376 af of Ventura County SWP contractors' flexible storage capacity in Castaic Lake.

⁸ Does not include other reliability measures available to CLWA and the retail water purveyors. These measures include short-term exchanges, participation in DWR's dry-year water purchase programs, local dry-year supply programs, and other future groundwater storage programs.

⁹ Net recoverable water after banking is 24,000 af and 32,522 af in 2002 and 2003, respectively.

¹⁰ Net recoverable water after banking is 20,000 af in each year.

¹¹ Water stored in Rosedale-Rio Bravo Banking and Exchange Program pursuant to the Buena Vista/Rosedale-Rio Bravo Water Acquisition Agreement.

¹² Supply shown is the stored water that can be extracted from the Semitropic Groundwater Storage Bank by The Newhall Land and Farming Company for the Newhall Ranch Specific Plan in dry years minus the 1,650 af also shown in this table under "Semitropic Water Banking and Exchange Program." Together, the total is 4,950 af. The total amount currently in storage is 18,828 af. Newhall Ranch is located within the CLWA service area. Delivery of stored water requires further agreements between CLWA and Newhall Land.

8. CUMULATIVE WATER DEMAND AND SUPPLY ANALYSIS

The following discussion focuses on the cumulative impacts to water availability for the Santa Clarita Valley. The analysis evaluates cumulative impacts under the following three future water demand and supply scenarios:

Scenario 1. Existing development within the CLWA service area, plus near-term projections, plus the project (referred to as the SB 610 Water Demand and Supply Scenario).

Scenario 2. Existing development within the CLWA service area, plus County General Plan DMS projections, plus the project (referred to as the DMS Build-Out Scenario).

Scenario 3. Buildout within the CLWA service area by 2030, plus active pending General Plan Amendment requests, plus the project (referred to as the Santa Clarita Valley 2030 Build-Out Scenario).

a. SB 610 Water Demand and Supply Scenario

As indicated previously, the Valencia Water Company prepared a Revised Landmark WSA for the proposed project. The revised WSA is found in Recirculated Draft EIR **Appendix 4.10**. Based on the information in the WSA, Valencia Water Company concludes there will be a sufficient water supply available at the time the Landmark Village project is ready for occupancy to meet the needs of the project, in addition to existing and other planned future uses in the Santa Clarita Valley.

Valencia Water Company's ~~current 2008~~ service area-wide demand ~~is was~~ approximately 32,730,756 afy.⁵² As mentioned previously, the Landmark Village project will require approximately 972 afy at buildout. The average year, dry year, and multiple dry-year water assessment are presented below. These assessments are based on current information provided by CLWA, the local retail purveyors, and the 2005 UWMP.

Average Year Water Assessment. Total projected average/normal-year water demands for the CLWA service area through the year 2030 are compared with the supplies projected to be available to meet demands in this average/normal-year water analysis (see **Table 4.10-18, Projected Average/Normal Year Supplies and Demands**).

**Table 4.10-18
Projected Average/Normal Year Supplies and Demands**

Water Supply Sources	Supply (af)				
	2010	2015	2020	2025	2030
Existing Supplies					
Wholesale (Imported)	69,707	69,707	69,707	69,707	69,707
SWP Table A Supply ⁽¹⁾	57,100	57,100	57,100	57,100	57,100
Buena Vista-Rosedale	11,000	11,000	11,000	11,000	11,000
Nickel Water - Newhall Ranch	1,607	1,607	1,607	1,607	1,607
Flexible Storage Account (CLWA) ⁽²⁾	0	0	0	0	0
Flexible Storage Account (Ventura County) ⁽²⁾	0	0	0	0	0
Local Supplies					
Groundwater	46,000	46,000	46,000	46,000	46,000
Alluvial Aquifer	35,000	35,000	35,000	35,000	35,000
Saugus Formation	11,000	11,000	11,000	11,000	11,000
Recycled Water	1,700	1,700	1,700	1,700	1,700
Total Existing Supplies ⁽¹⁾	117,407	117,407	117,407	117,407	117,407

52 This represents year 2008~~7~~ demand. Dry year demand is approximately 10 percent higher.

Water Supply Sources	Supply (af)				
	2010	2015	2020	2025	2030
Existing Banking Programs					
Semitropic Water Bank ⁽²⁾	0	0	0	0	0
Rosedale-Rio Bravo ⁽²⁾	0	0	0	0	0
Semitropic Water Bank – Newhall Land ⁽²⁾	0	0	0	0	0
Total Existing Banking Programs	0	0	0	0	0
Planned Supplies					
Local Supplies					
Groundwater	0	0	0	0	0
Restored wells (Saugus Formation) ⁽²⁾	0	0	0	0	0
New Wells (Saugus Formation) ⁽²⁾	0	0	0	0	0
Recycled Water - CLWA ⁽³⁾	0	1,600	6,300	11,000	15,700
Recycled Water - Newhall Ranch	0	1,500	2,500	3,500	5,400
Total Planned Supplies	0	3,100	8,800	14,500	21,100
Planned Banking Programs					
Additional Planned Banking ⁽²⁾	0	0	0	0	0
Total Planned Banking Programs	0	0	0	0	0
Total Existing and Planned Supplies and Banking ⁽¹⁾	117,407	120,507	126,207	131,907	138,507
Total Estimated Demand (w/o conservation) ⁽⁴⁾	100,050	109,400	117,150	128,400	138,300
Conservation at 10% ⁽⁵⁾	(8,600)	(9,700)	(10,700)	(11,900)	(12,900)
Total Adjusted Demand at 10% Conservation	91,450	99,700	106,450	116,500	125,400
Net Water Surplus (Deficit)	25,957	20,807	19,757	15,407	13,107

¹ SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of average deliveries projected to be available on Tables 6-3 and 6-12 of DWR's "Draft State Water Project Delivery Reliability Report 2009." Year 2030 figure is calculated by multiplying by DWR's 2029 percentage of 60%.

² Not needed during average/normal years.

³ Recycled water supplies based on projections provided in CLWA's 2005 UWMP Chapter 4, Recycled Water.

⁴ Demands are for uses within the existing CLWA service area. Demands for any annexations to the CLWA service area are not included.

⁵ A 10 percent reduction on urban portion of total normal demand is estimated to result from conservation best management practices, as discussed in CLWA's 2005 UWMP, Chapter 7. Not shown is a 10 percent per capita reduction in urban demand by 2015 and a 20 percent per capita reduction in urban demand by 2020 now mandated by ~~SB 757~~ SB 7X7.

Source in part: *Revised Landmark WSA* (January 2010)

Single Dry-Year Water Assessment. Table 4.10-19, Projected Single-Dry-Year Supplies and Demands, summarizes the existing and planned water supplies available to the CLWA service area through 2030 should a single-dry-year occur, similar to the drought that occurred in California in 1977. Demand during single-dry years was assumed to increase by 10 percent. During prolonged dry periods, experience indicates that a reduction in demand of 10 percent is achievable through the implementation of conservation Best Management Practices.

Water Supply Sources	Supply (af)				
	2010	2015	2020	2025	2030
Total Estimated Demand (w/o conservation) ^{(7) (8)}	110,100	120,300	128,900	141,200	152,100
Conservation at 10% ⁽⁹⁾	(9,500)	(10,700)	(11,700)	(13,100)	(14,200)
Total Adjusted Demand at 10% Conservation	100,600	109,600	117,200	128,100	137,900
Net Water Surplus (Deficit)	25,917	23,917	31,637	27,337	25,137

¹ SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of single dry year deliveries projected to be available on Tables 6-4 and 6-13 of DWR's "Draft State Water Project Delivery Reliability Report 2009." Year 2030 figure is calculated by multiplying by DWR's 2029 percentage of 11%.

² Initial term of the Ventura County entities' flexible storage account is ten years (from 2006 to 2015).

³ The total amount of water currently in storage is 50,870 af, available through 2013. Withdrawals of up to this amount are potentially available in a dry year, but given possible competition for withdrawal capacity with other Semitropic banking partners in extremely dry years, it is assumed here that about one third of the total amount stored could be withdrawn.

⁴ Recycled water supplies based on projections provided in CLWA's 2005 UWMP Chapter 4, Recycled Water.

⁵ CLWA has 64,898 af of recoverable water as of 12/31/07 in the Rosedale-Rio Bravo Water Banking and Recovery Program.

⁶ Assumes additional planned banking supplies available by 2014.

⁷ Assumes increase in total demand of 10 percent during dry years.

⁸ Demands are for uses within the existing CLWA service area. Demands for any annexations to the CLWA service area are not included.

⁹ A 10 percent reduction on urban portion of total normal year demand is estimated to result from conservation best management practices ($[\text{urban portion of total normal year demand} \times 1.10] \times 0.10$), as discussed in CLWA's 2005 UWMP, Chapter 7. Not shown is a 10 percent per capita reduction in urban demand by 2015 and a 20 percent per capita reduction in urban demand by 2020 now mandated by ~~SB 7XX~~ SB 7XZ.

¹⁰ Delivery of stored water from the Newhall Land Semitropic Groundwater Bank requires further agreements between CLWA and Newhall.

¹¹ In 2008, CLWA also acquired approximately 850 af of non-SWP imported water supply by entering into a water transfer agreement with Yuba County Water Agency (YCWA); however, CLWA has not yet updated its water supplies/demand tables to reflect this additional non-SWP imported supply.

Source: *Revised Landmark WSA* (January 2010).

Multiple-Dry Year Water Assessment. Table 4.10-20, Projected Multiple-Dry Year Supplies and Demands, summarizes the existing and planned water supplies available to the CLWA service area through 2030 in the event that a four year multiple-dry year event occurs, similar to the drought that occurred in California during the years 1931 to 1934. Demand during dry years was assumed to increase by 10 percent. During prolonged dry periods, experience indicates that a reduction in demand of 10 percent is achievable through the implementation of conservation Best Management Practices.

As shown, water supplies exceed demand by 20,927 (in 2030) to 29,327 (in 2020) acre-feet in multiple dry years with the incorporation of conservation measures. Again, it should be noted that dry year supplies available above demand reflect water supplies that would be called upon by purveyors in dry years. CLWA and the local purveyors would typically secure water from these supplies only in amounts necessary to meet demand.

Water Supply Sources	Supply (af)				
	2010	2015	2020	2025	2030
Total Estimated Demand (w/o conservation)	110,100	120,300	128,900	141,200	152,100
Conservation at 10%⁽¹¹⁾	(9,500)	(10,700)	(11,700)	(13,100)	(14,200)
Total Adjusted Demand at 10% Conservation	100,600	109,600	117,200	128,100	137,900
Net Water Surplus (Deficit)	25,167	21,567	29,327	24,127	20,927

¹ Supplies shown are annual averages over four consecutive dry years (unless otherwise noted).

² SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of average deliveries projected to be available during the worst case four-year drought of 1931-1934 as provided in Table 6-13 of DWR's "Draft State Water Project Delivery Reliability Report 2009." Year 2030 figure is calculated by multiplying by DWR's 2029 percentage of 35%.

³ Based on total storage amount available ÷ by 4-yr dry pd.). Initial term of the Ventura County entities' flexible storage account is 10 years (2006-2015).

⁴ Total Saugus pumping is the avg. annual amount that would be pumped under the groundwater operating plan summarized in Table 3-6, 2005 UWMP.

⁵ Recycled water supplies based on projections provided in CLWA's 2005 UWMP Chapter 4, Recycled Water.

⁶ CLWA has 64,898 af of recoverable water as of 12/31/07 in the Rosedale-Rio Bravo Water Banking and Recovery Program.

⁷ Average dry year period supplies could be up to 20,000 af for each program depending on storage amounts at the beginning of the dry period.

⁸ Assumes additional planned banking supplies available by 2014.

⁹ Assumes increase in total demand of 10 percent during dry years.

¹⁰ Demands are for uses within the existing CLWA service area. Demands for any annexations to the CLWA service area are not included.

¹¹ A 10 percent reduction on urban portion of total normal year demand is estimated to result from conservation best management practices [(urban portion of total normal year demand x 1.10] * 0.10), as discussed in CLWA's 2005 UWMP, Chapter 7. Not shown is a 10 percent per capita reduction in urban demand by 2015 and a 20 percent per capita reduction in urban demand by 2020 now mandated by ~~SB 752~~ SB 7X7.

¹² Delivery of stored water from the Newhall Land Semitropic Groundwater Bank requires further agreements between CLWA and Newhall.

¹³ In 2008, CLWA also acquired approximately 850 af of non-SWP imported water supply by entering into a water transfer agreement with Yuba County Water Agency (YCWA); however, CLWA has not yet updated its water supplies/demand tables to reflect this additional non-SWP imported supply.

Source: *Revised Landmark WSA* (January 2010).

Conclusion. Based on the analysis set forth in this section, the documents used or relied on in preparing this section, the Revised Landmark WSA, information provided by CLWA and the purveyors, and the 2005 UWMP, there are sufficient water supplies to serve the Landmark Village project and other existing and planned uses within the CLWA service area in an average/normal year, single-dry year, and in multiple-dry years for the present through 2030.

b. Development Monitoring System (DMS) Build-Out Scenario

The DMS Build-Out Scenario entails existing development, buildout of the near-term subdivision projects listed in the County's DMS, plus a portion of the Newhall Ranch Specific Plan, plus the proposed Landmark Village project. The analysis of this cumulative development scenario is required by the County for the cumulative analysis of water service. The County's DMS lists all pending, recorded, and approved projects for which land divisions have been filed within County unincorporated lands and

within the City of Santa Clarita. The City plus County unincorporated areas together constitute the County's Santa Clarita Valley Planning Area.

Table 4.10-21, Scenario 1: DMS Build-Out Scenario Demand and Supply for the Santa Clarita Valley, below, illustrates both the cumulative water demand (existing plus DMS) and supply for the Santa Clarita Valley. This cumulative water demand is compared to the near-term projected Santa Clarita Valley water supplies and the additional Newhall Ranch Specific Plan water supplies. As shown, there is an adequate supply of water expected in both average years and dry years and no cumulative water supply impacts would occur. In fact, the table shows that water supplies exceed demand for the DMS development scenario by 27,21229,465 af in average years and by 23,59326,101 to 25,94328,451 af in dry years. However, it should be noted that dry year supplies available above demand reflect water supplies that would be available to CLWA and the local purveyors in dry years. CLWA and the local purveyors would typically secure water from these supplies only in amounts necessary to meet demand.

Table 4.10-21
Scenario 1: DMS Build-Out Scenario Demand and Supply for the Santa Clarita Valley
(acre-feet)

	Average Years	Dry Years	
		Multiple Dry	Single Dry
Santa Clarita Valley Demand			
- Existing Plus DMS Demand ⁽¹⁾	102,68999,770	112,958109,747	112,958109,747
- Landmark Demand	972	1,069	1,069
- Less Conservation at 10%	(10,3669,700)	(11,40310,700)	(11,40310,700)
Total	93,29591,042	102,624100,116	102,624100,116
Santa Clarita Valley Supply⁽²⁾			
- Local Supply			
a. Groundwater			
Alluvial aquifer	35,000	32,500	32,500
Less Newhall Ranch Agricultural Water	(3,039)	(3,039)	(3,039)
Saugus Formation	11,000	15,000	15,000
Restored Impacted Wells		5,000	10,000
Saugus Formation (new)	-	- 1,500	0 -
b. Newhall Ranch Agricultural Water	3,039	3,039	3,039
c. Recycled Water	3,300	3,300	3,300
Newhall Ranch WRP Supply	1,500	1,500	1,500
- Imported Supplies			
a. SWP Table A Amount ⁽³⁾	57,100	33,300	7,600
b. Newhall Nickel Water	1,607	1,607	1,607
b. Additional Planned Banking		5,000	20,000

	Average Years	Dry Years	
		Multiple Dry	Single Dry
c. Flexible Storage Account		1,510	6,060
d. Buena Vista-Rosedale Transfer	11,000	11,000	11,000
e. Rosedale-Rio Bravo Groundwater Bank		15,000	20,000
Total Supplies	120,507	126,217	128,567
Total Supplies above Demand ⁽⁴⁾	<u>27,212</u>29,465	<u>23,593</u>26,101	<u>25,943</u>28,451

Notes:

- (1) Complete buildout of DMS land uses is estimated to occur in 2015.
- (2) See, 2005 UWMP and 2009~~8~~ Water Report (~~December 2009~~May 2010) (see Recirculated Draft **Appendix 4.10**).
- (3) Dry-year supplies above demand reflect water supplies that would be available to purveyors in dry years. Purveyors would typically secure water from these available supplies only in amounts necessary to meet demand.
- (4) The surplus shown above is the net water available for banking programs (e.g., Rosedale-Rio Bravo Groundwater Banking Project, other groundwater banking projects, etc.).

c. DMS General Plan Consistency

The purpose of this subsection is to assess the Landmark Village project's consistency with the County's General Plan DMS policies as they relate to water supply. As indicated previously in this section, the County's General Plan includes provisions known as the DMS to give decision makers information about the existing capacity of available public services at the time a new development proposal is considered in the four major Urban Expansion Areas of the County of Los Angeles General Plan (Antelope Valley, Santa Clarita Valley, Malibu/Santa Monica Mountains, and East San Gabriel Valley).⁵³ The goal of DMS is to identify what new public facilities will be required for the new development, and to ensure that the appropriate cost of any expansion of facilities will be paid for by that new development, and not assumed by the taxpayers. In accomplishing the goal stated above, the DMS determines the availability of school, fire, sewerage, library, water and road services and facilities on an individual and cumulative basis. The DMS data used for this analysis includes the following:

- (a) Inventory information reports for water, sewer and library services in the Santa Clarita Valley;
- (b) Service Provider Reports for the water wholesaler (CLWA) and water retailers in Santa Clarita Valley and County Sanitation Districts 26 and 32; and
- (c) A list of all pending, approved, and recorded projects where land divisions have been filed within both the unincorporated area of the County and the City of Santa Clarita.

The DMS also works toward ensuring that the expansion costs of new development are paid for by that development.

⁵³ Resolution of the County of Los Angeles Board of Supervisors, Plan Amendment Case No. S.P. 86-173.

~~To ensure new development is located in close proximity to services and existing development, DMS states that in no event is the proposed development to be located beyond 1 mile of an existing development or service. Also, DMS states that new development is to be located within, generally, 5 miles of commercial services and job opportunities.~~

The DMS includes a computerized database that incorporates information supplied by service providers and determines capital facility capacity and demand placed on the system by existing, pending, approved, and recorded projects for which land divisions have been filed within the four major Urban Expansion Areas. The DMS is used to quantitatively determine project and cumulative impacts on many County and other public services. In EIRs, wherever a proposed development project would result in an exceedance of applicable County infrastructure or facilities (such as water supply), a significant impact is identified, and mitigation is recommended as appropriate. The General Plan DMS requirements apply to "subdivisions" proposed within the Santa Clarita Valley.

This analysis addresses water supply requirements resulting from buildout of all pending, recorded, and approved projects listed in the County's DMS, plus the Landmark Village project and a portion of the Newhall Ranch Specific Plan. As indicated in **Table 4.10-21**, above, there is sufficient water supply for the demand of the Landmark Village project and all pending approved and recorded projects in DMS. Therefore, the Landmark Village project is not expected to create any significant cumulative water availability impacts under the County's DMS analysis.

In addition to ensuring that an adequate supply of water is available for a project and that new development is located in close proximity to services and existing development, DMS requirements also indicate that the project in question must be located within 1 mile of an existing development or service and that the development be located within generally 5 miles of commercial services and job opportunities. The Landmark Village site is located within the retail water service area of Valencia Water Company. It is also within the wholesale service area of CLWA.

Based on the information provided in this analysis, the Landmark Village project is consistent with the General Plan DMS policies as they relate to water supplies.

d. Santa Clarita Valley 2030 Build-Out Scenario

The Santa Clarita Valley 2030 Build-Out Scenario entails buildout of lands under the current land-use designations indicated in the County's Areawide Plan and the City of Santa Clarita's General Plan by the year 2030, plus the proposed Landmark Village project, plus all known active pending General Plan Amendment requests for additional urban development in the County unincorporated area and the City of Santa Clarita.

As depicted in **Table 4.10-23**, below, purveyors have access to an amount of water supplies that exceed demand during dry conditions. Therefore, no cumulatively significant water availability impacts would occur due to buildout of the Landmark Village project.

Because cumulative water supplies exceed demand, cumulative development (including the proposed Landmark Village project) would not result in significant unavoidable cumulative impacts on Santa Clarita Valley water resources. Therefore, cumulative mitigation measures are not required.

Table 4.10-23
Scenario 2: Santa Clarita Valley 2030 Build-Out Scenario Water Demand and Supply
(acre-feet)

	Buildout (Year 2030)		
	Average Years	Single Dry Years^c	Multi-Dry Years^c
Santa Clarita Valley Water Supplies	138,507	163,037	158,827
Total Build-Out Demand at 10% Conservation ^b	125,400	137,900	137,900
Total Surplus at 10% Conservation	13,107	25,137	20,927

^a Source: 2005 UWMP, Draft State Water Project Delivery Reliability Report, 2009, and the Revised Landmark WSA prepared for the Landmark Village project.

^b Demand is increased by approximately 10% in dry years. Not shown is a 10 percent per capita reduction in urban demand by 2015 and a 20 percent per capita reduction in urban demand by 2020 now mandated by ~~SB 758~~ SB 7X7.

^c Dry year supplies available above demand reflect water supplies that would be called upon by purveyors in dry years. Purveyors would typically secure water from these supplies only in amounts necessary to meet demand.

9. MITIGATION MEASURES

The County of Los Angeles already has imposed mitigation measures required to be implemented as part of the Newhall Ranch Specific Plan. These mitigation measures, as they relate to water resources, are found in the previously certified Newhall Ranch Additional Analysis, Volume VIII (May 2003) and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). The project applicant has committed to implementing the applicable mitigation measures from the Newhall Ranch Specific Plan to ensure that future development of the project site would not result in significant water-related impacts, and would not adversely affect adjacent properties.

a. Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan, as They Relate to the Landmark Village Project

The following mitigation measures (Mitigation Measure Nos. 4.11-1 through 4.11-22, below) were adopted by Los Angeles County in connection with its approval of the Newhall Ranch Specific Plan (May

2003). The applicable mitigation measures will be implemented to mitigate the potentially significant water-related impacts associated with the proposed Landmark Village project. These measures are preceded by "SP," which stands for Specific Plan. The text provided in the parenthetical below summarizes whether the Specific Plan mitigation is applicable to the proposed Landmark Village project.

- SP 4.11-1 The proposed Specific Plan shall implement a water reclamation system in order to reduce the Specific Plan's demand for imported potable water. The Specific Plan shall install a distribution system to deliver non-potable reclaimed water to irrigate land uses suitable to accept reclaimed water, pursuant to Los Angeles County Department of Health Standards. *(Consistent with this measure, the Project Description section of this EIR discusses the fact that the Landmark Village project will install and implement a recycled water delivery system. As required by this measure, recycled (reclaimed) water would be used to irrigate land uses suitable to accept recycled water, pursuant to Los Angeles County Department of Health standards.)*
- SP 4.11-2 Landscape concept plans shall include a palette rich in drought-tolerant and native plants. *(Consistent with this measure, the Landmark Village project's landscape plans shall include a palette rich in drought-tolerant and native plants.)*
- SP 4.11-3 Major manufactured slopes shall be landscaped with materials that will eventually naturalize, requiring minimal irrigation. *(Consistent with this measure, the Landmark Village project's grading/landscape plans shall include a note requiring landscaping with materials that will eventually naturalize, requiring minimal irrigation.)*
- SP 4.11-4 Water conservation measures as required by the State of California shall be incorporated into all irrigation systems. *(Consistent with this measure, the Landmark Village project shall incorporate into all of its irrigation systems, water conservation measures required by the State of California.)*
- SP 4.11-5 The area within each future subdivision within Newhall Ranch shall be annexed to the Valencia Water Company prior to issuance of building permits. *(This measure is not applicable to the Landmark Village project, because the project site is already located within the Valencia Water Company's service area.)*
- SP 4.11-6 In conjunction with the submittal of applications for tentative tract maps or parcel maps which permit construction, and prior to approval of any such tentative maps, and in accordance with the requirements of the Los Angeles County General Plan DMS, as amended, Los Angeles County shall require the applicant of the map to obtain written confirmation from the retail water agency identifying the source(s) of water available to serve the map concurrent with need. If the applicant of such map cannot obtain

b. Additional Conditions of Approval Associated With the Specific Plan

In addition to the adopted Newhall Ranch Specific Plan mitigation measures, the County's Board of Supervisors adopted additional conditions of approval applicable to the entire Newhall Ranch Specific Plan. These additional conditions of approval are found in the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). The following condition of approval relates to water resources, and is applicable to the Landmark Village project:

- (e) *Prior to approval of the first subdivision map which permits construction, a report will be provided by the applicant which evaluates methods to recharge the Saugus Aquifer within the Specific Plan, including the identification of appropriate candidate land areas for recharge. The report shall be subject to approval by the Department of Public Works (DPW) and other applicable regulatory agencies, as determined by DPW. (The referenced report has been completed and included in Recirculated Draft EIR Appendix 4.10.)*

c. Additional Mitigation Measures Proposed by this EIR

~~Implementation of t~~ The above Specific Plan mitigation measures are as part of the Landmark Village project by virtue of the County's approval of the Newhall Ranch Specific Plan (May 27, 2003), and would mitigate impacts to water resources to less than significant levels. The above Specific Plan mitigation measures also will be incorporated into the County's Mitigation Monitoring Plan for the Landmark Village project as applicable. Nonetheless, to ensure that the Landmark Village project impacts to water resources remain less than significant, the following mitigation measure was included in the Draft EIR; such mitigation also will be included in the County's Mitigation Monitoring Plan for the Landmark Village project to ensure enforcement of the measure: As a result, no additional mitigation measures beyond those identified in the Newhall Ranch Specific Plan Program EIR are required or necessary, because the Landmark Village project does not result in any significant water related impacts after implementation of the above mitigation measures.

LV 4.10-1 Prior to the issuance of building permits associated with each subdivision map allowing construction within the Landmark Village site, the applicant shall pay Facility Capacity Fees to the Castaic Lake Water Agency (CLWA) in accordance with CLWA policies and procedures.

10. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project Impacts

With implementation of the Specific Plan mitigation measures, the proposed project would not result in or contribute to any significant unavoidable impacts on Santa Clarita Valley water resources. No further mitigation measures are required.

b. Cumulative Impacts

Because the proposed project is relying on local independent water supplies (i.e., local groundwater and recycled water from local water reclamation plants), the proposed Landmark Village project does not result in or contribute to any significant unavoidable cumulative impacts on Santa Clarita Valley water supplies. Therefore, as stated above, cumulative mitigation measures are not required.

4.11 WASTEWATER DISPOSAL

1. SUMMARY

Construction impacts would be less than significant, as portable, on-site sanitation facilities would be utilized during construction activities. The proposed Landmark Village project would generate a worst-case average total of 0.41 million gallons per day (mgd) of wastewater that would be treated by the Newhall Ranch Water Reclamation Plant (WRP). The treatment capacity of the Newhall Ranch WRP would be 6.8 mgd, with a maximum flow of 13.8 mgd. Until the development of the Newhall Ranch WRP is complete, there are two options for the temporary conveyance and treatment of wastewater generated by the proposed project. The first option is to construct an initial phase of the Newhall Ranch WRP to serve the project site, with buildout of the WRP occurring over time as demand for treatment increases. As the WRP is intended to serve the Newhall Ranch Specific Plan area, of which Landmark Village is a part, the initial phase of the WRP would be designed and constructed to accommodate the project's predicted wastewater generation of 0.41 mgd. The second option would temporarily direct wastewater flows to the Valencia WRP until the first phase of the Newhall Ranch WRP is complete. Based on the ~~County Sanitation Districts of Los Angeles County (CSDLAC)~~ Santa Clarita Valley Sanitation District (SCVSD) future wastewater generation estimates and the planned expansion of the Saugus and Valencia WRPs, the Valencia WRP would have sufficient capacity to temporarily accommodate the project's predicted wastewater generation of 0.41 mgd. For these reasons, wastewater disposal impacts would be less than significant.

2. INTRODUCTION

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.12 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with wastewater disposal for the entire Newhall Ranch Specific Plan. The Newhall Ranch Specific Plan Program EIR concluded that Specific Plan implementation without mitigation would result in significant impacts, but that construction of the Newhall Ranch WRP and associated waste transmission infrastructure as well as implementation of the identified mitigation measures would reduce the impacts to below a level of significance. All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan and the County of Los Angeles General Plan and Santa Clarita Valley Area Plan.

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. **Section 4.11** assesses the Landmark Village project's existing conditions relative to wastewater disposal, the project's impacts on wastewater disposal, and the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR, and any additional mitigation measures recommended by this EIR for the Landmark Village project.

3. SUMMARY OF THE NEWHALL RANCH SPECIFIC PLAN PROGRAM EIR FINDINGS

The approved Newhall Ranch WRP will be located within the Specific Plan area to treat Specific Plan-generated wastewater. The WRP site is located on the south side of State Route 126 (SR-126) adjoining the Santa Clara River, near the Los Angeles County/Ventura County line. Without construction of the Newhall Ranch WRP and associated waste transmission infrastructure, the increased demand for wastewater treatment associated with buildout of the Specific Plan is considered a significant impact.

Based on the Newhall Ranch Specific Plan Program EIR and record, the County's Board of Supervisors found that the significant wastewater disposal impacts caused by buildout of the Specific Plan were mitigated to below levels of significance with construction of the Newhall Ranch WRP, the associated waste transmission infrastructure and adoption of specified mitigation measures.¹

The project-level wastewater/sewer plan is intended to be consistent with, and implement, the Specific Plan's approved Conceptual Backbone Sewer Plan (Exhibit 2.5-3 of the Specific Plan). This plan set forth a program-level system for wastewater/sewage collection for Newhall Ranch. The Specific Plan also committed that all sewer system facilities would be designed and constructed for maintenance by the County, County Sanitation Districts of Los Angeles County (CSDLAC), or a new County sanitation district in accordance with their manuals, criteria and requirements. **Figure 1.0-31, Landmark Village Portion of Specific Plan – Conceptual Backbone Sewer Plan**, depicts the Specific Plan's Conceptual Backbone Sewer Plan, as it relates to Landmark Village. In response to the approved Specific Plan, the Los Angeles County Local Area Formation Commission (LAFCO) has approved formation of the Newhall Ranch County Sanitation District, effective July 27, 2006.² The new WRP's capacity would be 6.8 mgd, with a maximum flow of 13.8 mgd.

The environmental effects of constructing and operating the WRP were evaluated at the project-level in the certified Newhall Ranch Specific Plan Program EIR. The following areas were determined to have significant unavoidable impacts: agricultural resources, air quality, visual quality and solid waste. Agricultural impacts would result from the conversion of 15 acres of prime agricultural land to an urban use. Air quality impacts were associated with site grading that would generate quantities of dust exceeding the South Coast Air Quality Management District (SCAQMD) daily threshold of significance, even after application of all available dust controls to reduce the amount of dust by roughly 61 percent. Visual quality impacts were due to the contrast of the WRP site with the vacant land within the river corridor, both during and following construction. Solid waste impacts were a result of project landfill

¹ See, Mitigation Measures 4.12-1 through 4.12-7 in both the certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). All of these mitigation measures are reiterated in the mitigation measures portion of this EIR.

² CSDLAC comment letter to Daniel Fierros, Department of Regional Planning, dated January 22, 2007.

disposal of biosolids produced as a by-product of the wastewater treatment process because such facilities are limited in number and have finite capacity, and because new facilities are expensive and difficult to develop. Based on the Newhall Ranch Specific Plan Final EIR for the WRP and record, the County's Board of Supervisors found that the significant unavoidable impacts caused by the WRP were offset by overriding economic, legal, social, and public benefits. Consistent with Section 15093 of the Guidelines, these benefits were found to outweigh the significant unavoidable impacts and make them acceptable.

4. EXISTING CONDITIONS

This information and the technical studies from the certified Newhall Ranch Specific Plan Program EIR (see Program EIR Appendix 4.12) were assessed at the project-level for the Landmark Village project to determine if there were wastewater disposal issues that were not examined in the certified EIR. It was determined that all significant wastewater disposal effects were identified, adequately addressed, and mitigated or avoided in the certified EIR and related environmental findings (*California Environmental Quality Act (CEQA) Guidelines* Section 15152). Therefore, at the project level, this EIR will incorporate by reference the existing conditions analysis and background information relating to wastewater disposal from the certified Newhall Ranch Specific Plan Program EIR (Section 4.12). This information has been updated as appropriate.

This section is divided into two distinct topics:

- Wastewater treatment facilities
- Wastewater collection system

a. Wastewater Treatment Facilities

Most wastewater generated within the Santa Clarita Valley is treated at two existing WRPs, which are operated by the Santa Clarita Valley Sanitation District (SCVSD). The SCVSD is a member of the County Sanitation Districts of Los Angeles County (CSDLAC). The existing Saugus WRP is located at 26200 Springbrook Avenue in Saugus. The existing Valencia WRP is located at 28185 The Old Road in Valencia. These two facilities, illustrated in **Figure 4.11-1, Existing Water Reclamation Plans and Sanitation Districts**, provide primary, secondary, and tertiary treatment. The SCVSD has a permitted treatment capacity of 28.1 mgd and a treated average of 20.5 mgd.³ While a small portion of the Newhall Ranch Specific Plan site is within the Sphere of Influence of the SCVSD, virtually the entire Specific Plan site is

³ County Sanitation Districts of Los Angeles County. *Final 2015 Santa Clarita Valley Joint Sewerage System Facilities EIR*, January 1998.

outside the service area of the SCVSD. The Newhall Ranch County Sanitation District (NRCSD) will provide wastewater services for Newhall Ranch Specific Plan communities like Landmark Village. Currently, wastewater generated by the few existing buildings located on the Newhall Ranch Specific Plan site is accommodated by on-site septic systems. The four small buildings located in the eastern portion of the Landmark Village project site are used for storage and other activities associated with on-site agriculture. Therefore, no wastewater is generated from the proposed Landmark Village tract map site.

The mechanism used to fund expansion projects is the Districts' Connection Fee Program. Prior to the connection of the local sewer network to the CSDLAC system, all new users are required to pay for their fair share⁴ of the District sewerage system expansion through a "connection fee." The fees fund treatment capacity expansion and trunk lines, while on-site sewer mains are the responsibility of the developer.

The rate at which connections are made—and revenues accumulate—drives the rate at which periodic expansions of the system will be designed and built. The SCVSD routinely monitors system capacity and anticipated development to ensure sufficient capacity for approved developments. However, it should be noted that connection permits are not issued if there is not sufficient capacity. Therefore, the expansion of district facilities may not be immediate if adequate capacity does not exist to serve new users, or the expansion may occur in the future if it is determined that there is adequate capacity to serve new users, but inadequate capacity to serve future development within the tributary area(s) of the affected collection/treatment facilities, thereby necessitating future system expansions. In the latter case, the connection fees paid by new users are deposited into a restricted Capital Improvement Fund (CIF) used solely to capitalize the future expansion of affected system facilities. The cyclical process of building phased expansions and collecting connection fees can continue indefinitely. The only restriction would be when the districts run out of land. Existing facilities can be expanded to handle a daily capacity of 34.2 mgd, which is sufficient to meet demand up until 2015.⁵ The district does not expect to exceed a daily capacity of 34.2 mgd because connection permits will not be issued that would exceed this amount.

⁴ The fair share is equivalent to the cost of expanding the system to accommodate the anticipated sewage flows from the new users.

⁵ County Sanitation Districts of Los Angeles County. *Final 2015 Santa Clarita Valley Joint Sewerage System Facilities EIR*, January 1998.

The CSDLAC has prepared a Facilities Plan, with a horizon year of 2015, for the SCVSD and a Draft EIR. The Facilities Plan, approved in January 1998, estimates future wastewater generation for the probable future service area of the SCVSD in order to anticipate future treatment capacity and wastewater conveyance needs. According to CSDLAC estimates, total flows projected from the Santa Clarita Valley in 2015, exclusive of Newhall Ranch, would be 34.2 mgd. This projection is based on Southern California Association of Governments (SCAG) 1996 population projections. As a result of this finding, CSDLAC proposed a phased plan to incrementally expand the treatment facilities at the Saugus and Valencia WRPs to meet future needs to a total of 34.2 mgd.⁶ This phased expansion plan, which would increase treatment capacity by approximately 15 mgd, has been approved. The most recent phase was completed in May 2005 and expanded treatment capacity by approximately 9 mgd, or approximately 47 percent, to the current total treatment capacity of approximately 28.1 mgd. Based on populations projections published in the most recent SCAG 2004 Regional Transportation Plan, the Valencia WRP has adequate capacity through the year 2015, exclusive of Newhall Ranch. Another phase (Stage VI) of treatment facility expansion would increase capacity by 6 mgd, but will not be constructed until flow materializes.⁷ According to recent SCVSD flow projections, based on Southern California Association of Governments (SCAG) Regional Transportation Plan, 2008, the previously approved Stage VI expansion at the Valencia WRP is not expected to be needed until approximately 2021 and the site build out capacity of 34.2 mgd is not expected to be reached until approximately 2033. Consequently, the planned short-term use of the Valencia WRP to treat 0.41 mgd of the project's wastewater is expected to have no impact on future expansion of the SCVSD facilities.

b. Wastewater Collection System

The CSDLAC wastewater collection system is composed of service connections that tie-in to the local collection network. This local network, composed of secondary and primary collectors, flows into the districts' trunk wastewater mains and the water reclamation plants. The ~~CSDLAC SCVSD~~ maintains the wastewater trunk mains that lead to the Saugus and Valencia WRPs, and the local collection network is maintained by the Consolidated Sewer Maintenance District of the Los Angeles County Department of Public Works~~Los Angeles County Department of Public Works Sewer Maintenance~~ for the City of Santa Clarita and Los Angeles County unincorporated areas. Local system facilities will need to be designed and constructed to meet CSMD and state standards and requirements. Regional system facilities will need to be designed and constructed to meet NRCSD and state standards and requirements.

The project site is presently undeveloped and there is no wastewater collection and conveyance system on the property. Existing gravity sewer mains run parallel to The Old Road within the right-of-way and

⁶ *Ibid.*

⁷ *Ibid.*

flow to a sewer lift station located near the intersection of The Old Road and Henry Mayo Drive at the east side of the Old Road right-of-way. The existing lift station pumps wastewater through a 16-inch force main to the Valencia WRP.

Operation and maintenance of local sewer lines within areas of unincorporated Los Angeles County, including the City of Santa Clarita, are the responsibility of the Consolidated Sewer Maintenance District of the Los Angeles County Department of Public Works. The Consolidated Sewer Maintenance District requires that new subdivision wastewater systems connect to the district's existing sanitary wastewater system, and any developer constructing a new wastewater line would have to coordinate the construction

- (a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- (b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; and
- (c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's commitments.

b. Construction-Related Impact Analysis

Construction contractors for the project would provide portable, on-site sanitation facilities that would be serviced at approved disposal facilities and/or treatment plants. The amount of construction-related wastewater that would be generated is not expected to have a significant impact on these disposal/treatment facilities due to expected low volume and temporary nature of the waste generated during construction.

c. Operational Impacts

(1) Demand

As shown in **Table 4.11-1**, the proposed project would generate a worst-case average total of 408,900 gallons per day (or 0.41 mgd) of wastewater that would be treated by the Newhall Ranch WRP or the Valencia WRP (see Recirculated Draft EIR **Appendix 4.11** for detailed calculations).

**Table 4.11-1
Landmark Village Wastewater Generation**

Land Use	Units	Quantity	Generation Factor (gpd)	Wastewater Generation (gpd)
Residential				
Single Family	dwelling unit	308	260	80,080
Multi-Family	dwelling unit	1,136	195	221,520
Non-Residential				
Commercial Retail	thousand square feet	1,033	100	103,300
Elementary School	thousand square feet	20	200	4,000
			Total	408,900

Source: County Sanitation Districts of Los Angeles Loadings and Unit Rates.

(2) Wastewater Treatment

The long-range plan is for the Newhall Ranch WRP to be constructed exclusively to serve uses within Newhall Ranch. The new WRP's capacity would be 6.8 mgd, with a maximum flow of 13.8 mgd. In response to the approved Specific Plan, the Los Angeles County Local Area Formation Commission (LAFCO) has approved formation of the Newhall Ranch County Sanitation District, effective July 27, 2006.¹⁰ Consequently, a new County sanitation district has been formed to facilitate future operation of the Newhall Ranch WRP.

In the interim, two options are available to treat wastewater generated by the proposed project. One option as shown in **Figure 1.0-32, Landmark Village Wastewater/Sewer Plan**, is to construct an initial phase of the Newhall Ranch WRP to serve the project site, with WRP buildout occurring over time as demand for treatment increases. The second option is to temporarily treat project wastewater at the Valencia WRP until flows are sufficient to support operation of the Newhall Ranch WRP. Each of these two options is described below."

(a) Treatment Option A

Project generated wastewater treatment has been calculated at 0.41 mgd. As noted above, At buildout, the treatment capacity of the Newhall Ranch WRP would be 6.8 mgd, with a maximum flow of 13.8 mgd. The WRP has been designed to serve the buildout of the Newhall Ranch Specific Plan area, of which Landmark Village is a part. Under this option, an initial phase of the Newhall Ranch WRP would be constructed to serve the Landmark Village subdivision with buildout of the WRP occurring over time as demand for treatment increases due to subsequent development of the Newhall Ranch Specific Plan. The first phase of the WRP would be sited to accommodate project generated waste. The WRP was conditioned by the Board of Supervisors to be designed and constructed to the standards of the County of Los Angeles Department of Public Works and CSDLAC; as a result, no significant operational impacts are expected.

(b) Treatment Option B

Under this option, an interim pump station would be constructed along the utility corridor to pump wastewater via pipeline to the existing Valencia WRP, located upstream of the project site along I-5. The pump station would be used until the first phase of the Newhall Ranch WRP is constructed. As a result of ~~CSDLAC's~~ ~~SCVSD's~~ future wastewater generation estimates, ~~SCVSD~~ ~~CSDLAC~~ has proposed a ~~two-~~phased plan to ~~incrementally~~ expand the SCVSD treatment facilities, which include ~~at the Saugus and~~

¹⁰ CSDLAC comment letter to Daniel Fierros, Department of Regional Planning, dated January 22, 2007.

Valencia WRPs, to meet anticipated future wastewater disposal needs to a total of 34.2 mgd.¹¹ ~~This phased expansion plan, which would increase treatment capacity by approximately 15 mgd, has been approved.~~ The most recent phase was completed in May 2005 and expanded treatment capacity by approximately 9 mgd, or approximately 47 percent, to the current total treatment capacity of approximately 28.1 mgd. Based on populations projections published in the ~~most recent~~ Southern California Association of Governments (SCAG) 2004 Regional Transportation Plan, the Valencia WRP has adequate capacity through the year 2015. Another phase (Stage VI) expansion would increase capacity by 6 mgd, but will not be constructed until flow materializes.¹² According to recent SCVSD flow projections, based on SCAG's 2008 Regional Transportation Plan, the previously approved Stage VI expansion at the Valencia WRP is not expected to be needed until approximately 2021 and the site build out capacity of 34.2 mgd is not expected to be reached until approximately 2033. Consequently, the planned short-term use of the Valencia WRP to treat 0.41 mgd of the project's wastewater is expected to have no impact on future expansion of the SCVSD facilities.

Additionally, numerous safeguards exist within the County's project approval process to ensure available treatment capacity, including that connection permits for new development are not issued if there is not sufficient capacity. Moreover, mitigation adopted by the County as part of its approval of the Specific Plan provides that prior to recordation of each subdivision permitting construction, the applicant is required to obtain a letter from the new County sanitation district stating that treatment capacity will be adequate for that subdivision (SP 4.12-4). As a result, no significant operational impacts would occur under this scenario.

(3) Collection Facilities

If the first phase of the Newhall Ranch WRP is used to treat effluent generated by the proposed project, then the collection and conveyance of wastewater would occur exclusively by gravity flow. Under this scenario, the first phase of the sanitary sewer trunk line would be placed in a 7.5-foot-wide by 15-foot-deep (average depth) trench extending along the southerly portion of the SR-126 right-of-way from the eastern boundary of the project site west approximately 16,100 linear feet (LF), where it would connect to the headworks of the new WRP. The new lines would be designed and constructed to meet ~~Los Angeles County Department of Public Works, CSDLAC/NRCSD,~~ and state standards and requirements. Therefore, wastewater collection system impacts under this option are considered less than significant.

¹¹ County Sanitation Districts of Los Angeles County. *Final 2015 Santa Clarita Valley Joint Sewerage System Facilities EIR*, January 1998.

¹² CSDLAC comment letter to Daniel Fierros, Department of Regional Planning, dated January 22, 2007.

The second option, as shown in **Figure 1.0-32**, would temporarily direct wastewater flows to the Valencia WRP until the first phase of the Newhall Ranch WRP is complete. This alternative would extend a sanitary sewer force main line in a 3-foot-wide by 4.5-foot-deep trench an estimated 12,500 LF from the project site easterly to the existing lift station at The Old Road and Henry Mayo Drive. Dependent upon the existing lift station's capacity, it may be possible for the force main to tie-in to the existing lines at the Henry Mayo Drive and The Old Road intersection. The tie-in to the lift station would allow this additional sewage to be conveyed to the existing Valencia WRP. However, if the existing lift station or force main cannot accept the additional sewage from the proposed project, the alignment would be extended approximately 18,100 LF where it would tie-in directly to the Valencia WRP. The alignment for this option is within the south side of the SR-126 and Henry Mayo Drive rights-of-way before turning south and traveling within the easterly right-of-way for The Old Road.

7. MITIGATION MEASURES

Although the proposed Landmark Village project may result in potential impacts to wastewater disposal services absent mitigation, the County already has imposed mitigation measures required to be implemented as part of the Newhall Ranch Specific Plan. These mitigation measures, as they relate to wastewater disposal, are found in the certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). The project applicant has committed to implementing the applicable mitigation measures from the Newhall Ranch Specific Plan to ensure that future development of the project site would not result in wastewater disposal impacts and would not adversely affect adjacent properties.

b. Santa Clarita Valley Cumulative Build-Out Scenario

The Santa Clarita Valley Cumulative Build-Out Scenario entails buildout of all lands under the current land use designations indicated in the Los Angeles County Santa Clarita Valley Area Plan and the Los Angeles County General Plan, plus the proposed project, plus all known active pending General Plan Amendment requests in the unincorporated area of the Santa Clarita Valley and in the City of Santa Clarita. **Table 4.11-2, Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario**, depicts the projected future development activity in the Santa Clarita Valley with and without the proposed project. Utilizing loading factors provided by the CSDLAC, under this build-out scenario, there would be an additional wastewater generation of 59.3 mgd. See **Table 4.11-3, Wastewater Generation Impact Analysis – Santa Clarita Valley Cumulative Build-Out Scenario**, for the detailed breakdown of Santa Clarita Valley Cumulative Build-Out Scenario wastewater calculations.

As previously discussed, the two existing Saugus and Valencia WRPs currently have a combined treatment capacity of 28.1 mgd, and would have a total projected 2015 capacity of approximately 34.2 mgd of wastewater. Using CSDLAC loading factors, buildout of the service areas of these two WRPs would increase the amount of wastewater generated in the SCVSD to 59.29 mgd, which is 25.09 mgd more than the proposed 2015 SCVSD expansion of 34.2 mgd.

As stated earlier, numerous safeguards exist within the County's project approval process to ensure available treatment capacity for new development within the service areas of ~~CSDLAC~~SCVSD, such as connection fees to pay for the full cost of facility expansions (including increasing water reclamation plant capacity). Although some amount of development in the Santa Clarita Valley would utilize on-site septic or package treatment facilities, it is expected that most of the build-out wastewater would be treated at ~~CSDLAC~~SCVSD plants. If buildout of the Santa Clarita Valley was permitted to occur without provision of additional treatment capacity at either the Saugus and Valencia WRPs or another site, significant wastewater disposal impacts would occur. However, with the County's safeguards in place that ensure no connections permits are issued if capacity is not available, no significant cumulative wastewater treatment impacts would occur.

Clarita General Plan, plus known active pending General Plan Amendments, the CSDLAC Facilities Plan bases its projections for wastewater generation on the SCAG 1996 Regional Transportation Plan. The Facilities Plan uses a residential and commercial wastewater generation rate of 101 gallons per capita per day, plus projected industrial wastewater and contracted entitlement flow. The Facilities Plan also assumes that if the Specific Plan is approved, its wastewater would be treated at the new WRP, rather than by the SCVSD. According to CSDLAC estimates (as opposed to the estimates of this EIR), total flows projected from the Santa Clarita Valley in 2015, *exclusive of the Specific Plan*, would be 34.2 mgd.¹⁴ The projected site capacity of the Saugus and Valencia WRPs will be a total of 34.2 mgd by the year 2015.¹⁵ In addition, SCVSD does not expect to exceed a daily capacity of 34.2 mgd because connection permits will not be issued that would exceed this amount. According to recent SCVSD flow projections, based on Southern California Association of Governments (SCAG) Regional Transportation Plan, 2008, the previously approved Stage VI expansion at the Valencia WRP is not expected to be needed until approximately 2021 and the site build out capacity of 34.2 mgd is not expected to be reached until approximately 2033. Consequently, the planned short-term use of the Valencia WRP to treat 0.41 mgd of the project's wastewater is expected to have no impact on future expansion of the SCVSD facilities. Because safeguards are in place that ensure no connection permits are issued if capacity is not available, no significant cumulative impacts on the SCVSD would occur under this scenario.

9. CUMULATIVE MITIGATION MEASURES

Cumulative development would be required to implement similar mitigation, if necessary, determined on a project-by-project basis. Therefore, no additional mitigation is recommended or required for this project.

10. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project-Specific Impacts

Provided that proposed mitigation measures are implemented, no significant unavoidable wastewater disposal impacts are expected to result from implementation of the proposed project.

b. Cumulative Impacts

Provided that mitigation measures are implemented, no significant unavoidable cumulative wastewater disposal impacts are expected to result from implementation of the proposed project.

¹⁴ CSDLAC comment letter to Daniel Fierros, Department of Regional Planning, dated January 22, 2007.

¹⁵ Preliminary WRP Site Capacity Evaluations for the SCVSD, County Sanitation Districts of Los Angeles County, 1996.

Angeles General Plan, Santa Clarita Valley Area Plan, plus the project, plus all known active pending General Plan Amendment requests for additional urban development in the unincorporated area of Santa Clarita Valley and in the City of Santa Clarita. A list of the future development activity (with and without the project) expected in the valley under this scenario is presented below in **Table 4.12-3, Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario**.

Under this scenario, which includes the project, total solid waste generation would be 395,553 tons per year. This quantity represents the cumulative solid waste generation under a worst-case scenario without any recycling activities in place. The project's share of 3,913~~08~~ tons per year would represent 0.99 percent of this total.

As discussed earlier in this section, new landfills will need to be developed and/or other waste disposal options implemented to accommodate future growth. It is reasonable to assume that the market forces that drive the waste disposal industry will put pressure on the industry and governmental agencies to continually identify new economically feasible means of waste disposal in the future to accommodate this growth. Because solid waste (including hazardous waste) can be disposed of outside of Los Angeles County and because solid waste disposal is driven by a free-enterprise system, it is reasonable to assume that, to some degree, solid waste generated by cumulative development would be disposed of outside Los Angeles County, and likely, outside of the State of California. Given this assumption, the cumulative projects area could encompass a geographic area beyond the jurisdictional boundaries of the Santa Clarita Valley and Los Angeles County and could, conceivably, extend beyond state boundaries. It is beyond the scope of this EIR and too speculative to attempt to quantify the solid waste that could be generated by cumulative development that is proposed in greater Los Angeles County or the region beyond, or to assess the landfills that might be available or, more importantly, other solid waste disposal options which could be available.

However, land suitable for landfill development or expansion is quantitatively finite and limited due to numerous environmental, regulatory, and political constraints. Based on this information, until the County and other jurisdictions that could conceivably accept solid and hazardous wastes can demonstrate that approved landfill space or other disposal alternative will be adequate to serve existing and future uses for the foreseeable future, project and cumulative solid and hazardous waste impacts are considered significant and unavoidable.

1. SUMMARY

The Castaic Union School District (Castaic District) and the William S. Hart Union High School District (Hart District) currently provide public elementary, junior high/middle school, and senior high school education in the Landmark Village project area. The Castaic District provides elementary school service (Kindergarten and grades 1-6) and middle school service (grades 7 and 8) to the project site. The Hart District provides senior high school (grades 9–12) service to the project site. The Landmark Village project would generate an estimated ~~299~~343 new elementary students, ~~138~~135 new middle school students, and ~~173~~172 new senior high school students for the two Districts at buildout.

*The “School Facilities Funding Agreement Between the Castaic Union School District and Newhall Land and Farming Company” (Castaic School Funding Agreement), effective November 20, 1997, and included in this EIR (Recirculated Draft EIR **Appendix 4.15**), would mitigate Landmark Village impacts on the Castaic District. Under the Castaic School Funding Agreement, the applicant and the Castaic District have provided a financing schedule and a financing plan, in combination with certain mitigation payments, which will provide permanent facilities, including land, buildings, furnishings and equipment, to house grades K–5 and 6–8 students who will reside in the Riverwood Village Planning Area of the Newhall Ranch Specific Plan. The proposed Landmark Village project is part of the Riverwood Village Planning Area. Once implemented, the Castaic School Funding Agreement would fully mitigate Landmark Village’s direct and cumulative impacts on the Castaic District’s educational facilities.*

*Project-specific impacts on the Hart District would be mitigated through the separate “School Facilities Funding Agreement Between the William S. Hart Union High School District and The Newhall Land and Farming Company” (Hart School Funding Agreement), effective ~~October~~December 1, 2009~~1998~~, and included in this EIR (Recirculated Draft EIR **Appendix 4.15**). The Hart School Funding Agreement conditionally obligates The Newhall Land and Farming Company to provide up to three additional junior high schools and two additional senior high schools to the Hart District. Once implemented, the Hart School Funding Agreement would fully mitigate Landmark Village’s direct and cumulative impacts on the Hart District’s educational facilities.*

Cumulative student generation under the Development Monitoring System (DMS) Build-Out Scenario and the Santa Clarita Valley Build-Out Scenario cannot be accommodated by existing or planned facilities within the school facilities that serve the valley; therefore, cumulative impacts on the school districts would be significant. Compliance, as appropriate, with existing School Facilities Funding Agreements and other mechanisms (e.g., Senate Bill [SB] 50, the Valley-Wide Joint Fee Resolution, and/or new school facilities funding agreements) would reduce cumulative development impacts on the school districts to below a level of significance and no significant unavoidable cumulative impacts to educational services are anticipated.

No significant unavoidable impacts would result from implementation of the proposed Landmark Village project.

a. Significance Threshold Criteria

According to Appendix G of the *State CEQA Guidelines*, a project would have a significant impact on schools if the project would result in:

- Substantial adverse physical impacts associated with the provision of new or physically altered school facilities; or
- The need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for school facilities.

b. Impact Analysis

The number of additional students that may be generated by any given development project is determined by the number and type of residential units to be developed. The proposed Landmark Village project includes 308 single-family detached and 1,136 single family attached/multi-family residential units (divided between 685 multi-family units and 451 apartments).

The number of students that would be generated by each new housing unit is referred to as the “student generation rate.” Student generation rates are largely calculated by categorizing the existing number of students within the particular school district by the type of home in which they live (single family, multi-family, and apartment), and then dividing the total number of students in each category by the total number of homes of each type. Student generation rates per housing type for the Castaic District and Hart District are provided in **Table 4.15-3, Student Generation Rates**.

**Table 4.15-3
Student Generation Rates**

School District	Student Generation Rates		
	Single-Family Detached	Single-Family Attached	Multi-Family
Castaic Union Elementary ¹	0.393357	--	0.1570205
Castaic Union Middle	0.161164	--	0.078074
Hart Senior High ²	0.23862194 ³	-0.0875 ³	0.07140915 ³

¹ Jaime Garcia, Castaic Union School District, telephone/electronic communication to Impact Sciences, Inc., November February 18, 2010/16, 2009.

² Lorna Baril, William S. Hart Union High School District, telephone correspondence to Impact Sciences, Inc., November 16, 2009.

³ For a conservative analysis, student generation for Hart Senior High has been calculated on the following basis: 308 single-family units at 0.23862194 single family detached generation rate, and 1,136 multi-family and apartment units at the 0.08750915 multi-family/single family attached generation rate.

Based on the number and type of housing units to be generated by the Landmark Village project and the student generation rate for each type of housing unit, the Landmark Village project would generate a total of ~~299-343~~ elementary students, ~~138-135~~ junior high school students, and ~~173-172~~ senior high school students (see Recirculated Draft EIR **Appendix 4.15** for calculations). Impacts on the Castaic District and Hart District as a result of the Landmark Village project are discussed below.

(1) Project Impacts to Castaic School District

In accordance with the provisions of the Castaic School Facilities Funding Agreement, the approximately ~~299-343~~ elementary students generated by the Landmark Village project would likely attend Live Oak School until the number of elementary students generated within the Specific Plan's Riverwood Planning Area reaches 420 students. At the time 420 students are generated, the proposed Landmark Village Elementary School would open and accommodate K–5 students. Live Oak Elementary is located at 27715 Saddleridge Way in Castaic, approximately 2.1 miles north-northeast of the project site. Because this school is located over 2 miles from the Landmark Village project site, students would require busing. Live Oak Elementary School has a permanent capacity of 750 students. Student enrollment for calendar year 2007–2008 is 741; therefore, this school is currently operating within capacity. However, since this elementary school is nearing capacity, the School Facilities Agreement Between the Castaic Union School District and Newhall states that the District can notify the project proponent that relocatable classrooms are necessary to house Riverwood Planning Area students if capacity is exceeded. The project proponent is required to provide the necessary funds to lease state emergency relocatable classrooms to house up to 420 Riverwood Planning Area students, if the Castaic Union School District applies for and is eligible for state emergency relocatable classrooms and the state does not have the funding or relocatable classrooms available. The project proponent would be required to lease the classrooms to or for the Castaic Union School District at no cost to the District until the opening of the proposed Landmark Village Elementary School. These terms of the Castaic School Facilities Funding Agreement serve to mitigate impacts on the Castaic District to less-than-significant levels.

The proposed Landmark Village project would generate approximately ~~138-135~~ students in grades 6–8. The Castaic District at Castaic Middle School would also serve students generated by the proposed Landmark Village project in grades 6–8. Castaic Middle School is located at 28900 Hillcrest Parkway in Castaic, approximately 4.5 miles north of the project site. Because this school is located over 2 miles from the Landmark Village site, students would require busing.

The Castaic Middle School is currently operating at 82 percent of design capacity, with 258 student excess capacity. There are currently no District plans to expand the Castaic Middle School or build a second middle school. Castaic Middle School currently has sufficient capacity to provide student capacity for the Landmark Village project. However, pursuant to the terms of the Castaic School Facilities Funding

Agreement, Newhall would contribute funds, as specified in the agreement, to the Castaic District for middle school facilities outside of the Specific Plan's Riverwood Village Planning Area. These terms of the Castaic School Facilities Funding Agreement serve to mitigate impacts on the Castaic District to less-than-significant levels.

(2) Project Impacts to the William S. Hart Union School District

The proposed Landmark Village project would generate approximately ~~173~~172 senior high school students. The Hart District would serve these students. Depending upon the year in which high school students are generated from the Landmark Village project, the high school students would attend either West Ranch High School (in which student enrollment currently exceeds the 2,600 design capacity by 56 students) or Castaic High School, which is expected to open in 2013 or 2014.

Currently, grades 10–12 in the Landmark Village project area are served by Valencia High School (which is four students in excess of capacity). Grade 9 is served by West Ranch High School (on the Rancho Pico Junior High School campus, which has excess capacity for 203 students). West Ranch High School is located at 26255 W. Valencia Boulevard, Stevenson Ranch, approximately 4.5 miles south of the project site. Because this school is located more than 2 miles from the project site, busing may be necessary for these students.

The Hart District is in the process of locating a site for a high school in the Castaic area, and the proposed Landmark Village project would eventually (after 2013 or 2014) be served by that high school. Under the Hart School Facilities Funding Agreement, Newhall would provide up to three additional junior high schools and two high schools to the Hart District that would ensure adequate school capacity to serve the Landmark Village project and other Newhall projects. As a result, no significant project impacts on the Hart District's school facilities would occur.

7. MITIGATION MEASURES

Although the proposed Landmark Village project may result in potential education impacts absent mitigation, the County already has imposed mitigation measures required to be implemented as part of the Newhall Ranch Specific Plan. These mitigation measures, as they relate to education, are found in the certified Newhall Ranch Specific Plan Program EIR (March 8, 1999) and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). The project applicant has committed to implementing the applicable mitigation measures from the Newhall Ranch Specific Plan to ensure that development of the project site would not result in education impacts, and not adversely affect adjacent properties.

Table 4.15-4
Summary of Cumulative Projects by School District – DMS Build-Out Scenario
(Pending, Approved, and Recorded Projects)

School District	Residential Units		
	Single-Family Detached	Single-Family Attached/ Multi-Family ¹	Total Units
Castaic Union Elementary			
Cumulative Projects	4,713	1,675	6,388
Proposed Project	308	1,136	1,444
Total	5,026	2,806	7,832
Number of Students Generated³	<u>1,975,794</u>	<u>444,575</u>	<u>2,416,370</u>
Castaic Union Jr. High			
Cumulative Projects	5,265	2,753	8,018
Proposed Project	308	1,136	1,444
Total	5,578	3,884	9,462
Number of Students Generated³	<u>898,915</u>	<u>303,287</u>	<u>1,201,202</u>
William S. Hart Sr. High			
Cumulative Projects	23,726	13,557 ²	37,283
Proposed Project	308	1,136	1,444
Total	24,039	14,688	38,727
Number of Students Generated³	<u>5,736,274</u>	<u>1,285,344</u>	<u>7,021,618</u>

Source: Los Angeles County Department of Regional Planning, Service Provider Report (April 23, 2003).

¹ Includes apartments at the multi-family rate or at the higher single-family attached rate, as applicable.

² Includes 273 mobile home units.

³ Student Generation Rates are included in Recirculated Draft EIR **Appendix 4.15**.

Under the DMS Build-Out Scenario (including the proposed project), there would be an additional 2,416,370 elementary school students, 1,201,202 junior high school students and 7,021,618 senior high school students that would need to be served by the Castaic District and Hart District (student generation calculations are provided in Recirculated Draft EIR **Appendix 4.15**). Based on an elementary school and junior high school classroom size of 20 and a senior high school classroom size of 32, these students would require a total of 124,19 additional elementary school classrooms, 60 additional junior high school classrooms, and 219,207 additional senior high school classrooms.

As previously discussed, the Castaic District proposes construction of one new elementary school in addition to the construction of Landmark Village elementary school. The Castaic District has no current plans for a second middle school, although the Landmark Village project would contribute funding toward the financing of a new middle school. Given that the existing schools in the District are operating at 95 percent capacity and the two new elementary schools (assuming a design capacity of approximately 750 students each) would not have enough capacity to serve the approximately 2,416,370 additional elementary students, cumulative impacts to the Castaic District under this scenario would be significant.

The Hart District will construct two new high schools with a combined capacity of 5,200 students, and a third high school with an assumed capacity of 2,600 students. These schools are being funded primarily through SB 50 and Hardship funds under SB 50. Although existing schools in the District are at 96 percent capacity, the addition of the three new proposed high schools with 7,800 would have sufficient capacity to serve the approximately ~~7,021~~6,618 new high school students; therefore, cumulative impacts to the Hart District under this scenario would be less than significant.

b. Santa Clarita Valley Cumulative Build-Out Scenario

The Santa Clarita Valley Cumulative Build-Out Scenario entails full buildout of both the project and all lands under the current land use designations indicated in the Santa Clarita Valley Area Plan and the Los Angeles County General Plan, plus all known active pending General Plan Amendment requests for additional urban development in the unincorporated area of Santa Clarita Valley and the City of Santa Clarita. A list of the future development activity (with and without the project) expected in the region under the Santa Clarita Valley Cumulative Build-Out Scenario is presented below in **Table 4.15-5, Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario**.

Table 4.15-5
Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario

Land Use Types	Cumulative Buildout w/o Project ¹	Project	Cumulative Buildout w/ Landmark Village ¹
Single-Family	93,412 du	308 du	93,720 du
Multi-Family	47,621 du	1,136 du	48,757 du
Mobile Home	2,699 du		2,699 du
Commercial Retail	18,866,030 sq. ft.	1,033,000 sq. ft.	19,899,030 sq. ft.
Hotel	2,071 room		2,071 room
Sit-Down Restaurant	283,790 sq. ft.		283,790 sq. ft.
Fast Food Restaurant	23,600 sq. ft.		23,600 sq. ft.
Movie Theater	3,300 seats		3,300 seats
Health Club	54,000 sq. ft.		54,000 sq. ft.
Car Dealership	411,000 sq. ft.		411,000 sq. ft.
Elem./Middle School	278,590 students	437 <u>478</u> students	279,027 <u>068</u> students
High School	12,843 students	173 <u>2</u> students	13,01 <u>6</u> <u>5</u> students
College	29,948 students		29,948 students
Hospital	247,460 sq. ft.		247,460 sq. ft.
Library	171,790 sq. ft.		171,790 sq. ft.
Church	501,190 sq. ft.		501,190 sq. ft.
Day Care	785,000 sq. ft.		785,000 sq. ft.
Industrial Park	41,743,950 sq. ft.		41,743,950 sq. ft.
Business Park	8,424,330 sq. ft.		8,424,330 sq. ft.
Manufacture/Warehouse	3,932,470 sq. ft.		3,932,470 sq. ft.
Utilities	1,150,240 sq. ft.		1,150,240 sq. ft.
Commercial Office	6,380,520 sq. ft.		6,380,520 sq. ft.

**Table 4.15-6
Student Generation as a Result of Cumulative Projects**

School Districts	Single-Family		Multi-Family		Mobile Homes			Total Students	Number of Classroom s ^z		
	Units	Per Unit Rate	Students Generated	Units	Per Unit Rate	Students Generated	Units				
ELEMENTARY											
Newhall (K-6)	13,771	0.60502	8,2636.913	10,163	0.285466 ⁴	1,6872.896	1,497	0.227078 ¹	105340	10,955149	5037
Saugus (K-6)	23,241	0.432950	10,0610.458	6,963	0.0884200	6451.393	50	0.0556198 ²	310	40,67911.861	534593
Castaic (K-5)	31,744	0.39357	12,47511.333	22,349	0.157.205	3,5094.582	25	0.157188 ³	45	15,98819	7996
Sulphur Springs (K-6)	21,666	0.336	7,280	9,283	0.336	3,119	1,219	0.47336	207410	10,606808	5340
Elementary Totals	90,422		38,07935.984	48,758		8,93011.990	2,791		319764	47,32848.738	2,3662.437
Jr. HIGH SCHOOL											
Hart Jr. (7-8)	54,065	0.4270116	6,8666.034	23,697	0.0429697	1,0161.652	2,123	0.0429697 ⁴	91193	7,9737.878	249246
Castaic (6-8)	22,381	0.1640.164	3,6033.670	16,001	0.08750.0740	1,4001.184	25	0.0780825 ⁴	2	5,0054.857	250152
Jr. High Totals	76,466		10,4699.704	39,698		2,4162.836	2,148		93195	12,97812.735	499398
Sr. HIGH SCHOOL											
Hart Sr. (9-12)	83,212	0.23862194	19,88418.257	45,163	0.0875915	3,9524.132	2,123	0.07951555 ⁶	169330	23,97522.719	749710
Sr. High Totals	83,212		19,88418.257	45,163		3,9524.132	2,123		169330	23,97522.719	749710
Total^z			69,40263.945			15,29818.958			5811,289	84,281191	3,6143.545

¹ ~~Multi-family~~ Mobile home student generation rate is the midpoint between a multi-family rate of 0.028285 and apartment rate of 0.253169 students per unit for the Newhall School District.

² Mobile home student generation rate is the midpoint between the multi-family rate of 0.200 and the apartment rate of 0.197 for Saugus Elementary Schools.

³ Mobile home student generation rate is the midpoint between the multi-family rate of 0.457200 and the apartment rate of 0.170 for Castaic Union Elementary Schools.

⁴ Mobile home student generation rate is the midpoint between the single-family rate of 0.04291116 and the multi-family rate of 0.0697 for Hart Junior High School.

⁵ Mobile home student generation rate is the midpoint between the multi-family rate of 0.0784 and the apartment rate of 0.910 for Castaic Union Middle Schools.

⁶ Mobile home student generation rate is the midpoint between the single-family rate of 0.08752194 and the multi-family rate of 0.0744915 for Hart Senior High School.

^z Assumes 20 students per classroom for the Newhall, Saugus Union, Castaic Union and Sulphur Springs Union School Districts (all elementary schools as well as Castaic Jr. High (6-8)) and 32 students per classroom for the William S. Hart Union High School District (Hart Jr. and Sr. High).

^z Due to overlap of district boundaries, residential unit categories cannot be totaled.

4.18 AGRICULTURAL RESOURCES

1. SUMMARY

Development of the Landmark Village tract map and related off-site improvements would convert to non-agricultural land uses 199 acres of Prime Farmland, 6 acres of Farmland of Statewide Importance, and 143 acres of Unique Farmland, for a total of 348 acres of agricultural land. Additionally, site development would disturb 17 acres of Farmland of Local Importance and 600 acres of Grazing Land. No feasible mitigation exists to reduce the impacts resulting from the conversion of prime agricultural land to a less than significant level. The proposed project's irreversible loss of 348 acres of agricultural land is considered a significant impact, consistent with the findings of the Newhall Ranch Specific Plan Program EIR. Based on the applicable significance thresholds, the loss of Grazing Land is not considered a significant impact.

With respect to forest resources, the proposed Landmark Village tract map and related off-site improvements would not take place in areas zoned as forest land or timberland. Therefore, development of the project site would not conflict with such zoning or require a zone change from an existing forest land/timberland zone to a non-forest land/timberland zone, and there would be no impacts.

The Landmark Village project site contains approximately 35.5 acres of native trees (upland coast live oaks, southern coast live oak riparian, and southern cottonwood-willow riparian) that are dense enough to qualify as "Forest Land" under Public Resources section 12220(g). These 35.5 acres represent approximately 3.4 percent of the 1,045-acre project site. Of these 35.5 acres, 8.3 acres would be permanently disturbed as a result of project development and 27.2 acres would be temporarily disturbed. Therefore, approximately 23.3 percent of the native forest land on-site would be lost due to development of the project. This is considered a significant impact, which is identified in EIR Section 4.4, Biota. Mitigation measures are included in that section that will mitigate the loss of these forest resources, thereby reducing the impact to a less-than-significant level.

2. INTRODUCTION

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.4 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with agricultural resources for the entire Newhall Ranch Specific Plan. The Newhall Ranch Specific Plan EIR mitigation program was adopted by the County of Los Angeles (County) in findings and in the revised Mitigation Monitoring Plan for the Specific Plan. The Newhall Ranch Specific Plan Program EIR concluded that Specific Plan implementation would result in significant impacts and that no feasible mitigation exists that would reduce the impacts to below a level of significance.

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. **Section 4.18** discusses, at the project level, the Landmark Village project's existing conditions, the project's potential environmental impacts relative agricultural resources, the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR, and any additional mitigation measures recommended by this EIR for the Landmark Village project.

All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan, the County General Plan, and Santa Clarita Valley Area Plan.

Figure 4.18-3, On-Site USDA Soil Suitability, identifies the areas of the project site that are suitable for farming based on the site's capability classes (see Appendix 4.4 of the Newhall Ranch Specific Plan Program EIR for a listing of the capability classes for each of the soils on the site, along with their vegetative soil groups, range site indices, Storie Indices,⁶ and soil grades). As shown in **Figure 4.18-3**, based on USDA NCRS soil suitability, or capability, classifications, the Landmark Village tract map site is classified entirely as Very Good to Good. The majority of the utility corridor located north of State Route 126 (SR-126) and east of the Landmark Village tract map site is classified as Very Poor, while that portion of the utility corridor located west of the tract map site is designated Class I and II (Good to Very Good). Most of the Adobe Canyon borrow site, except for that portion located nearest to the river, is classified as VIII, which indicates areas unsuitable for farming.

c. Forest Land Resources

According to Public Resources Code section 12220(g), Forest Land is defined as "land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation and other public benefits." In order to determine if a project site can be classified as forest land, vegetation site surveys must be completed to determine if the project site currently contains native trees (including hardwoods) within its boundaries.⁷

A survey of the Landmark Village project site was conducted in November and December 2005, and July and August 2006. Upon completion of the vegetation site surveys, it was determined that there are three types of native trees on the project site: upland coast live oaks, southern coast live oak riparian forest, and southern cottonwood-willow riparian forest. The project site contains approximately 3.4 acres of upland coast live oaks, 0.6 acre of southern coast live oak riparian forest, and 31.5 acres of southern cottonwood-willow riparian forest. In total, 35.5 acres of forest resources are present on the project site (including the utility corridor and borrow sites).

⁶ The Storie Index numerically expresses the relative degree of suitability of a soil for general intensive agriculture. Four general factors are considered in the index rating, including the characteristics of the soil profile and soil depth, the texture of the soil surface, the dominant slope of the soil body, and other factors more readily subject to management or modification (i.e., drainage, flooding, salinity, sodicity, general nutrient level of the soil, and surface microrelief).

⁷ The County has not designated any portion of the Landmark Village project site for timber production. Therefore, the site supports no timberlands as that term is defined in Public Resources Code section 4256. See, *Big Creek Lumber Co. v. County of Santa Cruz* (2006) 38 Cal.4th 1139, 1155. For this reason, the Project would have no effect on available timberlands.

5. PROPOSED PROJECT IMPROVEMENTS

The applicant proposes to develop a total of 1,444 residential dwelling units with a total residential population of 3,680,⁸ approximately 1,033,000 square feet of commercial/mixed use space, a 9-acre elementary school, a 16-acre Community Park, four private recreational facilities, open space and river trail uses, trailhead, park and ride, and supporting roadway, drainage and infrastructure improvements. In addition, the applicant proposes to construct the Long Canyon Road Bridge over the Santa Clara River, and install exposed and buried bank stabilization on portions of the south and north side of the river.

The proposed project would require up to 5.8 million cubic yards of imported fill. The needed fill would come from the Adobe Canyon borrow site located outside the Landmark Village tract map site, but within the approved boundary of the Newhall Ranch Specific Plan area. **Figure 1.0-3, Project Boundary/Environmental Setting**, in **Section 1.0, Project Description**, depicts the location of the related off-site improvements, including the Adobe Canyon borrow site, the Chiquito Canyon grading site, the utility corridor, and the water tank location.

6. PROJECT IMPACTS

The analysis of potential impacts to agricultural resources associated with construction and operation of the proposed project, including the significance criteria applicable to assessing such impacts, is presented below.

a. Significance Threshold Criteria

According to Appendix G of the *State CEQA Guidelines*, a project would have a significant impact on agricultural resources if a project would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;⁹
- Conflict with existing zoning for agricultural use or a Williamson Act contract; ~~or~~
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g));
- Result in the loss of forest land or conversion of forest land to non-forest use; or

⁸ This is based on County-provided estimates of 3.17 persons per single-family dwelling, 2.38 persons per multi-family dwelling and per apartment.

⁹ The Farmland Mapping and Monitoring Program is administered by the California Resources Agency, Department of Conservation.

- Involve other changes in the existing environment which, due to their location or nature, could result in the conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

These are the significance criteria to be applied to the proposed project.

b. Impact Analysis

(1) Conversion of State Important Farmlands

According to the above significance thresholds, a significant impact would occur if a project converts Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses. As previously indicated, the USDA and the Department of Commerce (DOC), pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, have identified prime agricultural lands on the project site, as well as certain soil types that may favor some agricultural activities. Development of the Landmark Village project and related off-site improvements would convert to non-agricultural land uses 199 acres of Prime Farmland, 6 acres of Farmland of Statewide Importance, and 143 acres of Unique Farmland, for a total of 348 acres of agricultural land to urban uses. In addition, site development would disturb 17 acres of Farmland of Local Importance and 600 acres of Grazing Land. No feasible mitigation exists to reduce impacts resulting from the conversion of 348 acres of agricultural land to a less than significant level. The proposed project's irreversible loss of 348 acres of agricultural land is considered a significant project impact. Based upon the significance thresholds, the loss of Grazing Land is not considered a significant impact. These findings are consistent with those made by the Board of Supervisors for the adopted Newhall Ranch Specific Plan.

(2) Local Land Use Plans/Williamson Act Contracts**(a) Local Land Use Plans**

Although land within the project site is currently used for agricultural purposes, development of the site would not conflict with existing land use designations and zoning, as the project site was rezoned from agricultural uses to non-agricultural uses when the Newhall Ranch Specific Plan was adopted by the Los Angeles County Board of Supervisors on May 27, 2003. (Please see Specific Plan, Exhibit 2.3-1, Land Use Plan.) The project site is currently regulated by, and the proposed Landmark Village project is consistent with, the Newhall Ranch Specific Plan. The Specific Plan serves as the zoning within the site. Therefore, no significant impacts to local land use plans would result from implementation of the Landmark Village project.

As noted in the certified Newhall Ranch Specific Plan Program EIR, there is the potential for agriculture-related activities (*i.e.*, dust, noise, odor, chemical exposure, etc.) on undeveloped land in the Specific Plan or in Ventura County to impact project residents. However, due to the distance of the Landmark Village project site from Ventura County (approximately 1 mile), and the lack of active agricultural activity on land adjacent to the tract map site, potential agriculture-related impacts to residents of the proposed project are not considered significant.

(b) Williamson Act Contracts

No lands within Los Angeles County have ever been under Williamson Act contract.¹⁰ In addition, as of March 2002, Los Angeles County does not offer Williamson Act contracts.¹¹ Therefore, project development would not remove agricultural land from a Williamson Act contract and no significant impact would occur.

(3) Conflict With Existing Zoning for Forest Land or Timberland

Although native trees do exist on the Landmark Village project site, the site is not zoned for forest land or timberland. Therefore, no significant impacts relating to conflicts with existing zoning for forest land or timberland would result from implementation of the proposed project.

¹⁰ Telephone Interview with Julie Striplin Lowry, Senior Regional Planning Assistant, Los Angeles County Department of Regional Planning, March 17, 2003.

¹¹ Department of Conservation website, Division of Land Resource Protection, May 11, 2004.

(4) Loss or Conversion of Forest Land

As described above, Public Resources Code section 12220(g) defines Forest Land as “land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation and other public benefits.” The Landmark Village project site is currently vacant of urbanized land uses and contains naturally occurring vegetation. As noted above, biological investigations were conducted on the Landmark Village project site in November and December 2005, and July and August 2006 in order to determine the type of vegetation that currently exists on the project site. Special oak tree surveys were conducted between 2003 and 2006.

Based on these on-site surveys, it was determined that three types of native trees occur naturally on the Landmark Village project site: upland coast live oak, southern live oak riparian forest, and southern cottonwood-willow riparian forest. Specifically, the project site contains approximately 3.4 acres of upland coast live oaks, 0.6 acre of southern coast live oak riparian forest, and 31.5 acres of southern cottonwood-willow riparian forest. In total, 35.5 acres of forest resources are present on the project site (including the utility corridor and borrow sites). Development of the proposed project is expected to cause the permanent loss of 3.4 acres of upland coast live oak woodland and 4.9 acres of southern cottonwood-willow riparian forest, for a total loss of 8.3 acres of forest land. No southern coast live oak riparian forest would be permanently lost. In addition, the project would temporarily disturb 26.6 acres of southern cottonwood-willow riparian forest and 0.6 acre of southern coast live oak riparian forest.¹²

In sum, the project site contains approximately 35.5 acres of native trees, which constitutes approximately 3.4 percent of the entire project site (approximately 1,045 acres). The total amount of native trees that would be permanently disturbed (removed) with the development of the Landmark Village project is 8.3 acres, or 23.4 percent of the 35.5 acres of forest land on the project site. This is a potentially significant impact.

Potential impacts to these forest resources also are considered in **Section 4.4, Biota**, of this EIR, which determined that the proposed project would result in potentially significant impacts to these resources. As a result, that section identifies mitigation measures that will reduce such impacts to a level below significant. Specifically, with respect to the southern cottonwood-willow riparian forest present on the project site, previously adopted **Mitigation Measures SP 4.6-1 through SP 4.6-16 and SP 4.6-63** will

¹² Temporarily disturbed by bank stabilization and/or haul roads, but would be revegetated to native vegetation following completion of construction.

provide habitat restoration and enhancement at a minimum 1:1 riparian resource replacement ratio.¹³ With respect to the upland coast live oak and the southern coast live oak riparian forest on the project site, proposed **Mitigation Measure LV 4.4-6** requires the development of an Oak Resource Management Plan that will identify areas suitable for oak woodland enhancement and creation; and Mitigation Measure LV 4.4-7 would provide protective fencing around oaks during clearing and grading activities. These mitigation measures would ensure that the proposed project does *not* result in a significant loss of forest land.

7. PROJECT MITIGATION MEASURES

No feasible mitigation exists to reduce significant impacts resulting from the conversion of 348 acres of agricultural land on the Landmark Village project site to a less than significant level. While development of the Newhall Ranch Specific Plan has the potential to result in agriculture-related impacts to project residents as a result of agricultural activities conducted in Ventura County and in the vicinity of the project site, the County adopted mitigation measures for potential agriculture-related impacts as part of the Newhall Ranch Specific Plan that would reduce impacts to below a level of significance. These mitigation measures are found in the previously adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). The project applicant has committed to implementing these mitigation measures to ensure that future development within the Newhall Ranch Specific Plan area is safe and that such development would not adversely affect adjacent agricultural operations.

With respect to forest land resources, the proposed Project would mitigate its temporary impacts, *in situ*, at a 1:1 ratio. That is, following construction of the Project, the forest area temporarily disturbed would be restored at a 1:1 ratio and would have to meet certain success criteria as described in the mitigation measures included in Section 4.4, Biota, of this EIR. As to those trees permanently lost as a result of the Project, these will be replaced at a 1:1 ratio at a location selected by a qualified biologist, and would also have to meet success criteria described in the Biota mitigation measures. These mitigation measures are found in the previously adopted Mitigation Monitoring Plan for the Newhall Ranch Specific Plan (May 2003) and have been incorporated into this EIR. The project applicant has committed to implementing these mitigation measures to ensure that significant impacts to native trees (forest land as defined by Public Resources Code section 12220(g)) associated with future development within the Newhall Ranch Specific Plan area would be mitigated to a level below significant. Moreover, **Section 4.4, Biota**, of this EIR recommends additional mitigation measures that will reduce to less-than-significant the project's impacts on forest lands and woodlands and no additional mitigation is necessary.

¹³ The 1:1 replacement ratio set forth in SP 4.6-63 has been incorporated into project-specific mitigation measure **LV 4.4-1**.

a. Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan, as They Relate to the Landmark Village Project

Mitigation measures to reduce potential impacts to residential uses resulting from agricultural operations in Ventura County were adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 2003). These measures are preceded by "SP," which stands for Specific Plan. Mitigation Measure 4.4-1 is applicable to the Landmark Village tract map site; however, Mitigation Measure 4.4.2 is not applicable due to its distance from Ventura County.

SP 4.4-1 Purchasers of homes located within 1,500 feet of an agricultural field or grazing area are to be informed of the location and potential effects of farming uses prior to the close of escrow.

SP 4.4-2 New homes within 1,500 feet of farming uses within Ventura County, if any, are to be informed that agricultural activities within Ventura County are protected under the County's right-to-farm ordinance, and are to be provided with copies of the County's Amended Ordinance 3730-5/7/85. *(This mitigation measure is not applicable to the Landmark Village tract map site due to its distance from Ventura County.)*

b. Additional Mitigation Measures Proposed by this EIR

The Newhall Ranch Specific Plan Program EIR identified the loss of prime agricultural land that would result from development of the Specific Plan as a significant and unavoidable impact. No feasible mitigation measures exist to reduce impacts resulting from the conversion of 348 acres of prime agricultural land to a less than significant level; therefore, this impact ~~is~~ was considered a significant unavoidable impact of the Landmark Village project~~Newhall Ranch Specific Plan~~. However, the following mitigation measure is recommended to minimize impacts to the extent feasible:

LV 4.18-1 In order to minimize the premature conversion of agricultural lands and to track that conversion, prior to issuance of the first grading permit in areas of Landmark Village where agricultural soils designated as prime farmland, unique farmland, and/or farmland of statewide importance exist (Pub. Resources Code section 21060.1), Newhall Land shall prepare a phasing map to document the phased discontinuation of existing agricultural activities located within the Landmark Village Project area over the course of its development.

~~Based on the information contained in the certified Newhall Ranch Specific Plan Program EIR, the County Board of Supervisors adopted mitigation and a Statement of Overriding Considerations.~~

The implementation of Specific Plan Mitigation Measure 4.14-1 would mitigate potential impacts to project residents purchasing homes located within 1,500 feet of an agricultural field or grazing area from being incidentally exposed to agricultural-related activities, and mitigation measures identified in Section

4.4, Biota, of this EIR would reduce potentially significant impacts to forest land to a level below significant. The proposed project would not result in any other significant impacts relating to agricultural resources and, therefore, no additional mitigation is needed or required.

8. CUMULATIVE IMPACTS

Conversion of agricultural land to urban uses has a history in Los Angeles County. According to Los Angeles County Farmland Conversion Reports prepared by the California Department of Conservation, Division of Land Resource Protection, for the 10 years between 1992 and 2002 approximately 54,543 acres of cultivated land have been committed to non-agricultural uses. This figure includes 2,448 acres of State Important Farmlands and 10,519 acres of Grazing Land.

Buildout of the Newhall Ranch Specific Plan and other reasonably foreseeable future related cumulative development in the region will result in the conversion of prime agricultural soils to non-agricultural uses; continuing an on-going trend in Los Angeles County. Given that implementation of the Landmark Village project and related off-site improvements would eliminate 348 acres of prime agricultural land, the Landmark Village project's contribution to the conversion of prime agricultural land in the region is considered cumulatively considerable.

Continued development of agricultural lands also has the potential to result in indirect impacts to agricultural operations (land use conflicts, crop theft, etc.). These impacts can result in a decline in the profitability of agriculture operations such that adjacent farmland owners may be induced to sell their properties in urbanizing areas. The Landmark Village project site is not located adjacent to lands zoned for agricultural use, nor is active agricultural land located adjacent to the tract map site. Moreover, mitigation measures have been incorporated into the Specific Plan requiring a setback separating development within the Newhall Ranch Specific Plan from agricultural activity in Ventura County. Therefore, the proposed project would not contribute significantly to this indirect cumulative impact. The conversion of agricultural lands to urban uses is a policy issue that lies in the hands of the local jurisdiction. Such conversion in Los Angeles County may not be considered significant, whereas, it may be significant in another jurisdiction. Each cumulative project should be evaluated on a case-by-case basis relative to its impact on local agricultural productivity.

With respect to forest land, the U.S. Forest Service and California Department of Forestry and Fire Protection (CalFire) determine Land Cover Changes in the State of California based on the collaborative effort of modeling changes using the California Land Cover Mapping and Monitoring Program

(LCMMP).¹⁴ The LCMMP provides data for four different regions in California, including the Southern Sierra, Northeastern California, South Coast area, and the North Coast area. The South Coast area (where the Landmark Village project site is located) covers 19.9 million acres. The area encompasses some or most of Imperial, Kern, Los Angeles, Monterey, Orange, Riverside, San Benito, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, and Ventura counties. The South Coast area also encompasses four national forests (Angeles, Cleveland, Los Padres, and San Bernardino) and other federal, state and privately owned land.¹⁵

As of 2007, the U.S. Forest Service surveyed and classified approximately 33,387,405 acres of forestland in California and approximately 19,335,993 acres of timberland in California.¹⁶ On a regional scale, CalFire, in collaboration with the U.S. Forest Service using the LCMMP, has mapped and classified an area of approximately 2,200,000 acres of hardwoods in the South Coast area of California.¹⁷

As discussed above, the development of the Landmark Village project site would result in the loss of approximately 8.3 acres of forest land resources. Based on the U.S. Forest Service inventory for 2007, the proposed project would result in the loss of approximately 0.00002 percent of the existing forestland in the State of California, and approximately 0.00004 percent of the existing timberland in the State of California. Furthermore, with the development of the Landmark Village project site, the loss of 8.3 acres of forestland (native trees – hardwoods) would represent approximately 0.00037 percent of the existing inventory of hardwoods within the South Coast Area of the State of California.

Therefore, the Landmark Village project would not contribute significantly to the cumulative loss of forest land/timberland and hardwood trees. The loss of forestland and timberland to urban uses is a policy issue that lies in the hands of the local jurisdiction. Such loss of forestland and timberland in Los Angeles County may not be considered significant, whereas, it may be significant in another jurisdiction. Each cumulative project should be evaluated on a case-by-case basis relative to its impact on local forestland and timberland resources.

9. CUMULATIVE MITIGATION MEASURES

No feasible mitigation measures exist to reduce the identified cumulative impacts to a less than significant level.

¹⁴ United States Department of Agriculture Forest Service and California Department of Forestry and Fire Protection, Monitoring Land Cover Changes in California, South Coast Project Area, July 2002, p. iv.

¹⁵ Monitoring Land Cover Changes in California, South Coast Project Area, July 2002, p. iv.

¹⁶ United States Department of Agricultural Forest Service, Forest Inventory and Analysis National Program, Forest Inventory Data Online, <http://fia.fs.fed.us/tools-data/default.asp>. Accessed March 1, 2010.

¹⁷ United States Department of Agricultural Forest Service and California Department of Forestry and Fire Protection, Monitoring Land Cover Changes in California, July 2002, p. 8.

- SP 4.215-3 Prior to issuance of grading permits, all abandoned oil and natural gas-related sites must be remediated to the satisfaction of the California Department of Oil and Gas, the Los Angeles County Hazardous Materials Control Program, the South Coast Air Quality Management District, and/or the Regional Water Quality Control Board (Los Angeles region).
- SP 4.215-4 All ongoing oil and natural gas operational sites adjacent to or in close proximity to residential, mixed-use, commercial, business park, schools and local and Community Parks shall be secured by fencing and emergency access to these locations shall be provided. *(This mitigation measure is not applicable to the Landmark Village project, because no ongoing oil and natural gas operational sites will occur within the project site.)*
- SP 4.215-5 The Specific Plan is to meet the requirements of Southern California Gas Company (SCGC) in terms of pipeline relocation, grading in the vicinity of gas mains, and development within SCGC easements. These requirements would be explicitly defined at the future tentative map stage.
- SP 4.215-6 All potential buyers or tenants of property in the vicinity of Southern California Gas Company transmission lines are to be made aware of the line's presence in order to assure that no permanent construction or grading occurs over and within the vicinity of the high-pressure gas mains.
- SP 4.215-7 In accordance with the provisions of the Los Angeles County Building Code, Section 308(d), all buildings and enclosed structures that would be constructed within the Specific Plan located within 25 feet of oil or gas wells shall be provided with methane gas protection systems. Buildings located within 25 feet and 200 feet of oil or gas wells shall, prior to the issuance of building permits by the County of Los Angeles, be evaluated in accordance with the current rules and regulations of the State of California Division of Oil and Gas. *(To reflect updated provisions of the Los Angeles County Building Code, this mitigation measure is replaced by LV 4.21-6.)*
- SP 4.215-8 In accordance with the provisions of the Los Angeles County Building Code, Section 308(c), all buildings and structures located within 1,000 feet of a landfill containing decomposable material (in this case, Chiquita Canyon Landfill) shall be provided with a landfill gas migration protection and/or control system. *(To reflect updated provisions of the Los Angeles County Building Code, this mitigation measure is replaced by LV 4.21-6.)*
- SP 4.215-9 In accordance with the provisions of the Los Angeles County Code, Title 11, Division 4, Underground Storage of Hazardous Materials regulations, the County of Los Angeles Department of Public Works shall review, prior to the issuance of building permits by the County of Los Angeles, any plans for underground hazardous materials storage facilities (e.g., gasoline) that may be constructed or installed within the Specific Plan.

b. Additional Mitigation Measures Proposed By This EIR

The following project-specific mitigation measures are recommended to mitigate the potentially significant environmental safety impacts that may occur with implementation of the proposed Landmark

Village project. These mitigation measures are in addition to those adopted in the previously certified Newhall Ranch Specific Plan Program EIR. To indicate that the measures relate specifically to the Landmark Village project, each measure is preceded by "LV," which stands for Landmark Village.

(1) Soil Staining

LV-4.21-1 During grading operations, those areas of the Landmark Village tract map property, the Adobe Canyon borrow site, and the Chiquito Canyon grading site identified as formerly containing above-ground storage tanks, current agricultural storage areas and current soil staining by the Phase I Environmental Site Assessment of Landmark Village Tentative Tract Map No. 53108, Highway 126, Newhall Ranch, California (BNA Environmental, May 2004) and Addendum Letter Phase I Environmental Site Assessment of Proposed Water Tank Locations and Utility Corridor Easements Associated With the Proposed Landmark Village Development Tentative Tract Map No. 53108, State Highway 126, Newhall Ranch, California (BNA Environmental, September 2004), shall be investigated for the presence of petroleum hydrocarbons and hazardous materials and/or wastes, and, where necessary, shall be remediated in conformance with applicable federal, state, and local laws, to the satisfaction of the California Department of Conservation, Division of Oil and Gas, the Los Angeles County Hazardous Materials Control Program, the South Coast Air Quality Management District, and/or the Regional Water Quality Control Board (Los Angeles region).

(2) Oil and Gas Wells

LV-4.21-2 During grading operations, all former oil wells located on the Landmark Village tract map property, the Adobe Canyon borrow site and the Chiquito Canyon grading site shall be reabandoned according to the requirements of the California Department of Conservation, Division of Oil and Gas, if such sites are to be disturbed or are located in an area of development.

LV-4.21-6 In accordance with the provisions of the 2008 Los Angeles County Building Code (Title 26), Section 110.4, all buildings and enclosed structures that would be constructed within the Specific Plan located within 25 feet of oil or gas wells shall be designed according to recommendations contained in a report prepared by a licensed civil engineer and approved by the Building Official. Buildings located within 25 feet and 200 feet of oil or gas wells shall, prior to the issuance of building permits by the County of Los Angeles, be evaluated in accordance with the current rules and regulations of the State of California Division of Oil and Gas. (This mitigation measure replaces Specific Plan mitigation measure SP 4.21-7.)

(3) Pipelines

LV-4.21-3 During grading operations, all pipelines located on the Landmark Village tract map property or the Chiquito Canyon grading site that will no longer be used to transport oil products shall be reabandoned according to the requirements of the California Department of Conservation, Division of Oil and Gas. The soil beneath these pipelines shall be assessed for petroleum hydrocarbons. Any contaminated soil located within

grading operations or development areas shall be remediated in conformance with applicable federal, state, and local laws, to the satisfaction of the California Department of Conservation, Division of Oil and Gas, the Los Angeles County Hazardous Materials Control Program, the South Coast Air Quality Management District, and/or the Regional Water Quality Control Board (Los Angeles region). Any pipeline to remain in use shall be assessed for hydrocarbon leakage.

(4) Debris and Asbestos

LV-4.21-4 During grading operations, all scattered suspect asbestos-containing material debris located on the Landmark Village tract map property, the Adobe Canyon borrow site and the Chiquito Canyon grading site shall be disposed of in accordance with applicable federal, state, and local requirements.

(5) Previously Unidentified Hazards

LV-4.21-5 In the event that previously unidentified, obvious, or suspected hazardous materials, contamination, underground storage tanks, or other features or materials that could present a threat to human health or the environment are discovered during construction, construction activities shall cease immediately until the subject site is evaluated by a qualified professional. Work shall not resume until appropriate actions recommended by the professional have been implemented to demonstrate that contaminant concentrations do not exceed risk-based criteria.

(6) Landfill Proximity

LV-4.21-7 In accordance with the provisions of the 2008 Los Angeles County Building Code (Title 26), Section 110.3, all buildings and structures located within 1,000 feet of a landfill containing decomposable material (in this case, Chiquita Canyon Landfill) shall be provided with a landfill gas migration protection and/or control system. (This mitigation measure replaces Specific Plan mitigation measure SP 4.21-8.)

9. CUMULATIVE IMPACTS

As man-made hazards are site-specific issues, no impacts would occur with respect to cumulative impacts.

10. CUMULATIVE MITIGATION MEASURES

There would be no cumulative impacts with regard to man-made hazards and, consequently, no cumulative mitigation measures are required.

the Los Angeles County Museum of Natural History or similar institution, regarding acceptance of fossil collections.

b. Additional Mitigation Measures Proposed by this EIR

At the project-specific level, the following mitigation measures are recommended to further mitigate potentially significant cultural/paleontological impacts that may occur with implementation of the proposed Landmark Village project. This mitigation is in addition to that adopted in the certified Newhall Ranch Specific Plan Program EIR. To reflect that the mitigation relates specifically to the Landmark Village project, the "LV" designation precedes the measures below.

LV 4.22-1 Although no other significant cultural resources were observed or recorded, all grading activities and surface modifications must be confined to only those areas of absolute necessity to reduce any form of impact on unrecorded (buried) cultural resources that may exist within the confines of the project area. In the event that resources are found during construction, activity shall stop and a qualified archaeologist shall be contacted to evaluate the resources. If the find is determined to be a historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Construction work may continue on other parts of the construction site while historical/archeological mitigation takes place, pursuant to Public Resources Code Section 21083.2(i).

LV 4.22-2 For archeological sites accidentally discovered during construction, there shall be an immediate evaluation of the find by a qualified archeologist. If the find is determined to be a historical or unique archeological resource, as defined under CEQA, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be provided. Construction work may continue on other parts of the construction site while historical/archeological mitigation takes place, pursuant to Public Resources Code Section 21083.2(i).

LV 4.22-3 Scientific specimens are to become the property of a public, nonprofit educational institution, such as the Los Angeles County Museum of Natural History (or similar institution). Most institutions are now requiring, as conditions for accepting the materials, that significant fossils be prepared, identified to a reasonable level, and catalogued before donation. Therefore, to meet these requirements, prior to the start of Project-related grading, an agreement shall be reached with a suitable scientific repository regarding acceptance of the fossil collection.

LV 4.22-4 A qualified paleontologist shall be retained to monitor and salvage scientifically significant fossil remains. The duration of these inspections depends on the potential for the discovery of fossils, the rate of excavation, and the abundance of fossils.

(a) The Saugus and Pico Formations have a high potential to yield paleontological resources and will require continuous monitoring during all grading activities. This may require use of multiple paleontologists working on the site at the same time if simultaneous ground disturbing activities are occurring over an extensive area to

assure all areas of excavation are being fully monitored for the presence of paleontological resources. The number of required monitors shall be determined by Project's monitoring paleontologist.

(b) The older dissected Pleistocene formations have a moderate potential to yield paleontological resources and will require half-time monitoring during all grading activities by a qualified paleontologist(s).

Periodic review of the paleontological potential assigned to each rock unit shall be conducted at the end of each phase of grading. This reassessment of potential will be used to develop mitigation plans for future phases of development. If fossil production is lower than expected, the duration of the monitoring efforts should be reduced to less than continuous monitoring during all grading activities.

LV 4.22-5 The paleontologist, in consultation with the grading contractor, developer, and Los Angeles County inspector, shall have the power to divert temporarily or direct grading efforts in the area of an exposed fossil to allow evaluation and, if necessary, salvage of exposed fossils.

8. CUMULATIVE IMPACTS

Impacts upon cultural and paleontological resources tend to be site-specific and are assessed on a site-by-site basis. As discussed above, the Landmark Village study area contains cultural resources. Where these resources exist, implementation of the proposed project would represent an incremental adverse cumulative impact to cultural resources. However, provided that feasible mitigation is implemented by the proposed project, the project is not anticipated to contribute to significant cumulative impacts. Therefore, the project will have less than significant impacts on cultural resources, and such effects would not be cumulatively considerable. In fact, if mitigation is properly carried out, a positive impact on cumulative cultural resource information would occur; that is, mitigation measures would result in the acquisition of additional scientific information about the prehistory of the region, thereby serving to

cap-and-trade program (*i.e.*, participation in the Western Climate Initiative); (4) implementation of existing state laws and policies, including California's clean car standards, good movement measures, and the low carbon fuel standard; and (5) targeted fees to fund the long-term implementation of AB 32. The GHG emission reduction measures identified in the Scoping Plan adopted by the Board will be developed over the next three years and enforceable by 2012. By January 1, 2014 and every five years thereafter, CARB is required to update the Scoping Plan.

California's November 2010 ballot includes a proposition (Proposition 23) that proposes to temporarily suspend implementation of AB 32 until the State's unemployment rate returns to specified levels for four consecutive calendar quarters.

(4) Senate Bill 97

With respect to CEQA, the California Legislature passed Senate Bill 97 (SB 97), which addresses GHG analysis under CEQA, during the 2007 legislative session. The bill contains two components, the first of which exempts from CEQA the requirement to assess GHG emissions for the following projects: (a) transportation projects funded under the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006; and (b) projects funded under the Disaster Preparedness and Flood Prevention Bond Act of 2006.

SB 97's second component confirms that no CEQA guidelines presently exist to advise agencies and project applicants of whether a particular project may result in a potentially significant impact to global climate change. Accordingly, SB 97 required that the Office of Planning and Research (OPR), by July 1, 2009, develop and transmit to CNRA guidelines for the mitigation of GHG emissions and their effects. CNRA is required to adopt the regulations by January 1, 2010. (This second component of SB 97 is codified at Public Resources Code, section 21083.05.)

Notably, Governor Schwarzenegger issued a signing message when enacting SB 97 that is instructive as to the Governor's policy on global climate change, which includes a directive towards coordinating the efforts of various agencies to efficiently and fairly achieve GHG emissions reductions:

Current uncertainty as to what type of analysis of greenhouse gas emissions is required under [CEQA] has led to legal claims being asserted which would stop these important infrastructure projects. Litigation under CEQA is not the best approach to reduce greenhouse gas emissions and maintain a sound and vibrant economy. To achieve these goals, we need a coordinated policy, not a piecemeal approach dictated by litigation.

This bill advances a coordinated policy for reducing greenhouse gas emissions by directing the Office of Planning and Research and the Resources Agency to develop CEQA guidelines on how state and local agencies should analyze, and when necessary, mitigate greenhouse gas emissions.

On June 19, 2008, in light of its SB 97-mandated obligations, OPR issued a *Technical Advisory*, which provides lead agencies and project applicants with informal advice on how to conduct GHG emissions analysis in CEQA documents. OPR intends the *Technical Advisory* to be used on an interim basis only (*i.e.*, until OPR and CNRA accomplish their SB 97 mandates).³⁰ The *Technical Advisory's* recommended approach notes that compliance with CEQA, for purposes of GHG emissions, entails three basic steps: (1) identification and quantification of GHG emissions; (2) assessment of the project's impact on climate change; and (3) identification and consideration of project alternatives and/or mitigation measures, if the project is determined to result in an individually or cumulatively significant impact.

On April 13, 2009, OPR transmitted its proposed amendments to the CEQA Guidelines to the CNRA.³¹ In the transmittal letter accompanying the proposed amendments, OPR noted that although the analysis of greenhouse gas emissions in environmental documentation "presents unique challenges to lead agencies," the analysis "must be consistent" with existing CEQA principles. Therefore, OPR confirmed that the proposed amendments "suggest relatively modest changes to various portions of the existing CEQA Guidelines."

On December 30, 2009, following an extensive public outreach program, the CNRA adopted amendments to the CEQA Guidelines that address GHG emissions and related issues. The CNRA transmitted the adopted amendments and the entire rulemaking file to the Office of Administrative Law (OAL) on December 31, 2009. On February 16, 2010, the OAL approved the adopted amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The adopted amendments became effective on March 18, 2010.

In its *Final Statement of Reasons for Regulatory Action* (December 2009), the CNRA observed:

Analysis of GHG emissions in a CEQA document presents unique challenges to lead agencies. Such analysis must be consistent with existing CEQA principles, however. Therefore, the Amendments comprise relatively modest changes to various portions of the existing CEQA Guidelines. Modifications address those issues where analysis of GHG emissions may differ in some respects from more traditional CEQA analysis. Other modifications clarify existing law that may apply both to analysis of GHG emissions as well as more traditional CEQA analyses.

³⁰ See *Technical Advisory -- CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review*, Governor's Office of Planning and Research, available online at <http://opr.ca.gov/ceqa/pdfs/june08-ceqa.pdf> (last visited February 9, 2009). (This document is available for public inspection and review at Los Angeles County Department of Regional Planning, 320 West Temple Street, Los Angeles, California 90012, and is incorporated by reference.)

³¹ See *CEQA Guidelines Sections Proposed To Be Added Or Amended*, Governor's Office of Planning and Research, available online at <http://opr.ca.gov/index.php?a=ceqa/index.html> (last visited April 15, 2009). (This document is available for public inspection and review at the County of Los Angeles Public Library, Valencia Branch, 23743 West Valencia Boulevard, Santa Clarita, California 91355-2191, and is incorporated by reference.)

(Final Statement of Reasons for Regulatory Action, CNRA [December 2009], p. 13.) The above excerpted language is consistent with the overall spirit of the adopted CEQA Guidelines language, which does not bring about radical changes in CEQA analysis but seeks to affirm that traditional CEQA principles extend to GHG emissions and global climate change.

With respect to the significance assessment, newly added CEQA Guidelines, section 15064.4, subdivision (b), provides:

A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:

- (1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;
- (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;
- (3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

The amendments also provide that lead agencies should consider all feasible means of mitigating greenhouse gas emissions. These potential mitigation measures may include carbon sequestration. If off-site or carbon offset mitigation measure are proposed, they must be part of a reasonable plan of mitigation that the agency itself is committed to implementing.

In its *Technical Advisory*, OPR requested that CARB submit recommendations regarding the appropriate significance criteria to use in environmental documentation, prepared pursuant to CEQA, when evaluating GHG emissions and global climate change impacts. Accordingly, on October 24, 2008, CARB issued its *Preliminary Draft Staff Proposal: Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act (Preliminary Draft Staff Proposal)*.³² In the

³² See Preliminary Draft Staff Proposal: Recommended Approaches For Setting Interim Significance Thresholds For Greenhouse Gas Emissions Under The California Environmental Quality Act, California Air Resources Board, available online at <http://www.arb.ca.gov/cc/localgov/ceqa/meetings/102708/prelimdraftproposal102408.pdf> (last visited February 9, 2009). (This document is available for public inspection and review at Los Angeles County Department of Regional Planning, 320 West Temple Street, Los Angeles, California 90012, and is incorporated by reference.)

Preliminary Draft Staff Proposal, CARB proposed tiered significance criteria for two types of projects: (1) industrial; and (2) commercial/residential. With respect to commercial/residential projects, CARB proposed a four tiered criterion:

- Tier 1: Is the project exempt from further analysis under existing statutory or categorical exemptions? If yes, there is a presumption of less-than-significant impacts with respect to climate change.
- Tier 2: Does the project comply with a previously approved plan that addresses GHG emissions? (The plan must satisfy certain requirements (*e.g.*, be consistent with AB 32 and/or SB 375, the latter of which is discussed further below).) If yes, there is a presumption of less-than-significant impacts with respect to climate change.
- Tier 3: Does the project satisfy certain minimum performance standards relating to construction and operational activities, or include equivalent mitigation measures, *and* emit no more than a yet to be determined quantity of emissions? If yes, there is a presumption of less-than-significant impacts with respect to climate change.
- Tier 4: The project will have significant climate change impacts.

CARB received public comment on the draft criteria. However, as of this time, CARB has suspended its work on the draft thresholds.

~~CNRA received OPR's recommended amendments to the CEQA Guidelines on April 13, 2009. On July 3, 2009, CNRA commenced the Administrative Procedure Act rulemaking process for certifying and adopting these amendments pursuant to Public Resources Code section 21083.05. During the process, CNRA will hold public hearings, receive oral comments, consider both written and oral comments, and publish the final rule, which will take into consideration comments made. In October 2009, CNRA issued revised proposed amendments to the CEQA Guidelines, which provide that lead agencies should consider the following factors when assessing the significance of impacts from GHG emissions on the environment:~~

- ~~• The extent to which the project increases or reduces GHG emissions relative to the existing setting.~~
- ~~• The extent to which the project exceeds a threshold of significance that the lead agency determines applies.~~
- ~~• The extent to which the project complies with requirements adopted to implement a plan for the reduction or mitigation of GHG emissions.~~

~~No specific methodologies for performing an assessment are indicated, but rather it is left to the lead agency to determine the appropriate methodologies in context of a particular project. The proposed amendments also indicate that lead agencies should consider all feasible means of mitigating greenhouse gas emissions that substantially reduce energy consumption or GHG emissions.~~

~~Among other things, CRNA noted in its Public Notice for the proposed amendments that impacts of GHG emissions should be considered in the context of a cumulative impact, rather than a project impact. The Public Notice states:~~

~~While the Proposed Amendments do not foreclose the possibility that a single project may result in greenhouse gas emissions with a direct impact on the environment, the evidence before [CRNA] indicates that in most cases, the impact will be cumulative. Therefore, the Proposed Amendments emphasize that the analysis of greenhouse gas emissions should center on whether a project's incremental contribution of greenhouse gas emissions is cumulatively considerable.~~

(5) Senate Bill 375

Senate Bill 375 (SB 375) was passed by the California Legislature on September 1, 2008, and chaptered into law on September 30, 2008. SB 375 requires CARB, working in consultation with California's

metropolitan planning organizations (MPOs), to set regional GHG reduction targets for the automobile and light truck sector for 2020 and 2035. CARB must provide each MPO with its reduction target by September 30, 2010. Each MPO then must incorporate the assigned GHG reduction target into its Regional Transportation Plan (RTP), which is used for long-term transportation planning, via a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS). Certain transportation planning and programming activities will need to be consistent with the SCS; however, SB 375 expressly provides that the SCS does not regulate the use of land, and further provides that local land use plans and policies (e.g., general plan) are not required to be consistent with either the RTP or SCS.

In accordance with SB 375, on January 23, 2009, CARB appointed a Regional Targets Advisory Committee (RTAC) to provide recommendations and methodologies to be used in the target setting process. The RTAC provided its recommendations in a report to CARB on September 29, 2009.

On August 9, 2010, CARB staff issued the Proposed Regional Greenhouse Gas Emission Reduction Targets For Automobiles And Light Trucks Pursuant To Senate Bill 375. With respect to the SCAG region, CARB staff proposed a reduction target of 8 percent for 2020, and 13 percent for 2035. The emissions reduction will be measured relative to 2005 levels and as a percent reduction in per capita emissions associated with passenger vehicles and light trucks. Based on CARB staff's Draft Regional Greenhouse Gas Emission Reduction Targets For Automobile And Light Trucks Pursuant To Senate Bill 375 (June 30, 2010), the targets exclude emission reductions expected from the AB 1493 and low carbon fuel standard regulations. The proposed reduction targets are scheduled to be considered by CARB on September 23, 2010. (CARB's SB 375-related materials are available on CARB's website at <http://www.arb.ca.gov/cc/sb375/sb375.htm>.)

SB 375 includes CEQA streamlining provisions for "transit priority projects," so long as the projects are consistent with the SCS. As defined in SB 375, a "transit priority project" shall: (1) contain at least 50 percent residential use, based on total building square footage and, if the project contains between 26 and 50 percent nonresidential uses, a floor area ratio of not less than 0.75; (2) provide a maximum net density of at least 20 dwelling units per acre; and (3) be within 0.5 mile of a major transit stop or high quality transit corridor.

(6) Energy Conservation Standards

The Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24), found in the California Code of Regulations, originally were established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 governs energy consumed by the built environment for commercial and residential buildings in California. This includes the HVAC system, water heating, and some fixed lighting. (Non-building energy use, or "plug-in" energy use, is not covered by Title 24.) The Title 24 standards are updated periodically to allow consideration and possible incorporation of new

energy efficiency technologies and methods. The standards that would apply to the proposed project use were adopted on April 23, 2008, and will be in effect as of January 1, 2010.

Title 24 does not specify building dimensions (*e.g.*, size, height, or orientation) and provides significant flexibility for window types, window amounts, insulation choice, and other parameters. Software is often used to calculate whether a building is Title 24 compliant by quantifying the built-environment energy use per square foot per year and the Time Dependent Valuation (TDV) of the energy use per square foot per year.³³ Title 24 compliance is based on TDV and not on annual energy use.

³³ TDV energy use is a parameter that speaks to the electricity burden that a building puts on the electric system. In general, there is a larger demand on the electricity supply system during the day (peak times) than at night (off peak). This results in a higher stress on the electricity delivery system per marginal unit electricity delivered at peak times. Therefore, the calculation of TDV weights energy used at different times at different values. For instance, for the same annual electricity use, a building that uses more electricity during the peak mid-day electrical usage period will have a higher TDV value.

6. PROJECT IMPACTS

The inhabitants of residential developments and users of commercial and municipal buildings use electricity, heating, and motor vehicle transportation, all of which emit GHGs. The most significant GHG emissions resulting from residential developments include carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). CO₂ is considered the most important GHG due primarily to the large amount of emissions produced by fossil fuel combustion, especially for the generation of electricity and powering of motor vehicles. CH₄ and N₂O also are emitted, though their emissions are much less significant than CO₂. CH₄ is emitted from the transmission, storage, and incomplete combustion of natural gas.

Accordingly, this section inventories and assesses the significance of GHG emissions from Landmark Village during construction and at buildout. This inventory includes some emissions that are within the control of the project applicant, such as grading and the placement of utilities; some emissions that are within the control of the individuals building the residential and commercial buildings, such as construction emissions; and some emissions in which control over emissions is shared by the developers and the residents, such as energy use in the built environment and traffic emissions.

Furthermore, at this stage of development, the exact design of the homes, businesses, and facilities to be located on the Landmark Village project site are not precisely known. However, estimates of the types of buildings and facilities proposed for Landmark Village site can serve as guidance for developing a first-order estimate of the Landmark Village project's anticipated GHG emissions. Because there are buildings planned for the future with unknown occupants, average current behavior is assumed. However, actual future emissions of the site will depend heavily upon the future homeowners' and business owners' habits (and are beyond the control of the project applicant).

a. Impact Significance Criteria

~~At present time, no relevant federal, state or local agencies have adopted applicable significance thresholds for the analysis of the proposed project's GHG emissions. (See *State CEQA Guidelines*, sec. 15064.7, subd. (b).) While many public agencies adopt regulatory standards as thresholds, the *State CEQA Guidelines* do not require adoption of regulatory thresholds. (*Ibid.* at subd. (a).)~~

At this time, there is no absolute consensus in the State of California among CEQA lead agencies regarding the analysis of global climate change and the selection of significance criteria. Numerous organizations, both public and private, have released advisories and guidance with recommendations designed to assist decisionmakers in the evaluation of GHG emissions given the current uncertainty

regarding when emissions reach the point of significance. Generally speaking, several options are available to lead agencies.

First, lead agencies may elect to rely on thresholds of significance recommended or adopted by state or regional agencies with expertise in the field of global climate change. (See *State CEQA Guidelines*, Section 15064.7(c).) However, to date, neither CARB nor SCAQMD have adopted significance thresholds for GHG emissions for residential or commercial development under CEQA.³⁹ As discussed above, CARB has suspended all efforts to develop a threshold, and SCAQMD's threshold remains in draft form. Accordingly, this option (i.e., reliance on an adopted threshold) is not viable for the County. That being said, CNRA's recent amendments to Appendix G of the CEQA Guidelines are instructive. As provided in Appendix G, lead agencies may want to consider whether the project would:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?⁴⁰

Second, lead agencies may elect to conclude that the significance of greenhouse gas emissions under CEQA is too speculative. However, the County has determined that this option is not viable due to the import and focus on global climate change created by the various regulatory schemes and scientific determinations cited in this section.

Third, lead agencies may elect to use a zero-based threshold, such that any emission of greenhouse gases is significant and unavoidable. The County does not endorse this type of threshold because it may indirectly truncate the analysis provided in CEQA documents and the mitigation commitments secured from new development. Moreover, no state or regional agency with expertise in global climate change has endorsed a zero-based threshold, which would likely result in the preparation of extensive

³⁹ Of note, in December 2009, the San Joaquin Valley Unified Air Pollution Control District adopted guidance for use by local lead agencies in assessing the significance of a project's GHG emissions under CEQA. The guidance relies on the use of performance-based standards, and requires that projects demonstrate a 29 percent reduction in GHG emissions, from business-as-usual, to determine that a project would have a less-than-significant cumulative impact. This threshold is not so dissimilar from the criteria utilized by the County, as defined further below, which effectuates a 29 percent emission reduction in order to support a finding that a project's emissions are not significant.

⁴⁰ Appendix G, Environmental Checklist Form, of the CEQA Guidelines does not contain mandatory significance thresholds. As noted in the introductory text to Appendix G, "[t]he sample questions in this form are intended to encourage thoughtful assessment of impacts, and do not necessarily represent thresholds of significance." For purposes of this greenhouse gas analysis, the Appendix G criteria are considered *as* supplemented by the City's determination that whether a project is consistent with the reduction mandate established by AB 32 is relevant when determining the significance of project impacts.

environmental documentation for even the smallest of projects, thereby inundating lead agencies and creating an administrative burden.

Fourth, lead agencies may elect to utilize their own significance criteria, so long as such criteria are informed and supported by substantial evidence. Here, the County has elected to identify its own significance criterion until such time as a state or regional threshold is adopted by a competent authority (e.g., CARB or SCAQMD).

Recent amendments to the State CEQA Guidelines adopted by CNRA, and specifically the addition of section 15064.4, subdivision (b), are instructive:

A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:

- (1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;*
- (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;*
- (3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.*

Appendix G of the State CEQA Guidelines also has been revised to provide some guidance regarding the criteria that may be used to assess whether a project's impacts on global climate change are significant. As noted above, the Appendix G environmental checklist form asks whether a project would: (a) generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or (b) conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The analysis provided in this section is informed by the factors identified above. Further, based on the above factors (and particularly the addition of Cal. Code Regs., tit. 14, section 15064.4, subdivisions (b)(2) and (b)(3)), and for purposes of this EIR, the County has determined it is appropriate to rely on AB 32 as a benchmark and use the statute to inform their judgment as to whether the proposed project's GHG emissions would result in a significant impact. (See State CEQA Guidelines, sec. 15064, subd. (f)(1).)

Accordingly, the following significance criterion is used to assess whether the project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impacts on the environment:

Will the project's GHG emissions impede compliance with the GHG emissions reductions mandated in AB 32?

To evaluate the proposed project's emissions under this significance criterion, the anticipated emissions are compared with the CARB 2020 No Action Taken (CARB 2020 NAT) scenario to determine if the project is likely to be consistent with rules propagated for California to meet its 2020 emissions reduction mandate. A 29 percent reduction from the CARB 2020 NAT scenario is required for the State of California to meet the AB 32 reduction mandate for year 2020. In summary, the proposed project's emissions inventory is contrasted with the emissions that would be expected if the proposed Project were constructed consistent with the assumptions utilized by CARB in developing the CARB 2020 NAT scenario. If the proposed project's emissions are at least 29 percent below the CARB 2020 NAT scenario, impacts would be less than significant.

Please note that while there seems to be a general consensus amongst California lawmakers, scientists and others that global climate change is a cumulative problem, such that one single project rarely has a significant effect, this analysis evaluates the proposed Project at the project-level *and* cumulative-level.

~~While SB 97 requires the *State CEQA Guidelines* to be amended to address global climate change, those revisions are not required to be adopted until January 1, 2010 (see Pub. Resources Code, sec. 21083.05); as of this writing, only draft proposed revisions are being circulated and considered by CNRA. With that said, the significance criterion identified above currently is consistent with CNRA's proposed amendments to the *State CEQA Guidelines* (issued in January 2009).~~

b. Emissions Estimation Methodology

(1) Emissions Estimation Guidance

This inventory was developed using guidance from two government-sponsored organizations: (i) CCAR, which was established by the California Legislature to assist willing parties in estimating and recording their GHG emissions to use as a baseline for meeting future emissions reduction requirements; and, (ii) IPCC, which publishes methodology reports that include relevant emission factors and specific scientific data that can be used to estimate GHG emissions from various activities.

(2) Emissions and Energy Use Studies

For estimating emissions based on electrical and natural gas energy use, literature information on patterns of energy use must often be employed. Studies commissioned by the United States Energy Information Administration (EIA) and CEC provide data on energy use patterns associated with municipal activities, natural resource distribution, and other activities that would take place in Landmark Village. These data were used to estimate energy use patterns which were applied to the specific characteristics of Landmark Village to estimate GHG emissions. In addition to EIA and CEC studies, studies performed by individual municipalities or scientific organizations also were used.

(3) Emissions Estimation Software

CARB, SCAQMD, and other public and private organizations have developed several software programs to facilitate the calculation of emissions from construction, motor vehicles, and urban developments by streamlining emissions estimation from these sources. This inventory was developed using several models to estimate GHG emissions from the Landmark Village development. These are the OFFROAD2007 model, the EMFAC model, the URBEMIS model, the Building America Research Benchmark Definition (BARBD), and the Micropas model. The features of each of these models are described below.

more vehicles and electricity demand. Also, developing countries often lack the technology or capital to utilize energy efficient products or construct cleaner burning-power plants. Carbon dioxide emissions in China are growing slightly faster than primary energy use as the fuel mix increasingly favors coal, a high carbon fuel. China is projected to account for 39 percent of the projected increase in GHGs between 2004 and 2030, thereby overtaking the United States as the world's biggest emitter before 2010.⁴¹

In the developing world, GHG increases are directly tied to population growth. Therefore, it makes sense to consider operational emissions (including vehicular emissions) from new residences as growth, as residences are rarely removed from the housing supply once constructed. There are exceptions, such as when one housing development replaces another, and, in those cases, the replacement residential development need not be considered growth.

(1) Existing Conditions

The project applicant periodically leases the Landmark Village site to the movie industry for set locations. Minor, existing, on-site structures are located on the project site. Portions of the project site also are leased for cattle grazing and agricultural operations. All existing emission sources would be eliminated by project build-out.

In light of the existing conditions, ENVIRON estimated emissions resulting from the farmland/agricultural operations uses, and specifically accounted for greenhouse gas emissions associated water use, fertilizer, and equipment. Emissions associated with the periodic lease of the project site to the movie industry were not accounted for as such activities are intermittent, limited, and unpredictable. Additionally, the emissions estimate does not account for the minor existing structures within the Landmark Village area due to the lack of data for these accessory structures. Finally, the cattle grazing and ranching activities on the project site were considered minimal. With that said, ENVIRON estimated the emissions associated with existing site conditions, particularly farmland/agricultural operations, to be roughly 553 metric tonnes of CO₂e per year.

(2) One-Time Emissions

The approval of Landmark Village would result in the one-time emission of construction and land use/vegetative change emissions, which total approximately 43,934 tonnes of CO₂e.

⁴¹ *World Energy Outlook 2006: Fact Sheet- Global Energy Trends The World's Energy Future: Where Are We Headed?*, available online at http://www.iea.org/textbase/papers/2006/fs_GlobalEnergyTrends.pdf. This report is available for public inspection and review at Los Angeles County Department of Regional Planning, 320 West Temple Street, Los Angeles, California 90012, and is incorporated by reference.

(a) Construction Emissions

There are three major construction phases for an urban development: demolition, site grading, and building construction. There will not be a demolition phase for this project, since the construction will occur on previously undeveloped land presently being utilized for agricultural purposes. The building construction phase can be broken down further into three subphases: building construction, architectural painting, and asphalt paving. GHG emissions from these construction phases are largely attributable to fuel use from construction equipment and worker commuting.⁴² In total, the construction phase of project build-out would result in the emission of 36,309 tonnes of GHGs.

Grading Phase:

With respect to grading-related emissions, URBEMIS was used to estimate the construction equipment emissions. The total amount of GHG emissions from grading construction equipment and on-highway

⁴² Three programs, the URBEMIS, OFFROAD2007 and EMFAC2007 models, were utilized to calculate construction emissions associated with grading. URBEMIS inputs for the phase length and amount of construction equipment were supplied by Impact Sciences, Inc., who also provided ENVIRON with the number of hours each type of equipment would be used in the construction of Landmark Village.

(32) Annual Emissions

The annual emissions from the Landmark Village development amount to approximately 20,193 tonnes of CO₂e per year.

(a) Residential Emissions

Residential buildings generate GHG emissions as a result of activities requiring electricity and natural gas as energy sources. When electricity is used in a residential building, the electricity generation typically takes place off-site.⁴⁷ The amount of energy, and, therefore, the associated GHG emissions emitted per dwelling unit, varies with the type of residential building. The major types of residential buildings proposed for Landmark Village are single-family homes, attached townhomes or condominiums, and apartments.

Energy use in residential buildings is divided into: (1) energy consumed by the built environment; and (2) energy consumed by uses that are independent of the construction of the building, such as plug-in appliances. In California, Title 24 governs the first category (energy consumed by the built environment) and regulates HVAC systems, water heating, and some fixed lighting. Examples of "plug-in" energy use include refrigeration, cooking, lighting, *etc.* Energy use for these two categories were calculated separately, and the resulting energy use quantities were then converted to GHG emissions by multiplying the total energy use by the appropriate emission factors, incorporating information on local electricity production.⁴⁸

Energy Use in the Built Environment:

The Micropas software was used to calculate the built environment energy use per square foot per year, and the TDV of the energy use per square foot per year in order to determine Title 24 compliance.⁴⁹ TDV energy use is a parameter that speaks to the electricity burden that a building puts on the electrical

⁴⁷ Residential energy sources also may include fuel, oil, kerosene, liquefied petroleum gas, and wood. However, these sources will likely contribute only small amounts of GHGs. In addition, wood burning hearths are addressed in the "area sources" section.

⁴⁸ The Southern California Edison specific emission factor for electricity deliveries is 665.72 lbs CO₂/MWh. (See *California Climate Action Registry Database, Southern California Edison PUP Report, 2005*, available online at <http://www.climateregistry.org/CarrotDocs/26/2005/SCEPUP05.xls>.) This report also is available for public inspection and review at Los Angeles County Department of Regional Planning, 320 West Temple Street, Los Angeles, California 90012, and is incorporated by reference.

⁴⁹ Title 24 determines compliance by comparing the energy use of a modeled, or "proposed home," to a minimally Title 24 compliant "standard home" of equal dimensions; accordingly, Title 24 focuses on building energy efficiency per square foot, and not the overall dimensions of a dwelling unit.

annual energy use and TDV energy do not necessarily scale linearly with each other, the analysis assumes that all sources covered by Title 24 would uniformly use 15 percent less annual energy. Non-Title 24 regulated energy use is assumed to still use the same amount of energy as a minimally Title 24 compliant building. For example, no credit is taken for any Energy Star appliances since it is difficult to determine which appliances may be present in the various nonresidential building categories. In addition to the Title 24 exceedance, the project applicant also has committed to provide photovoltaic equivalent systems for every 1,600 square feet of nonresidential roof area. As a result, overall CO₂ emissions associated with the nonresidential buildings that would be built at Landmark Village is unknown. This ~~uncertainty is expected to neither non-residential energy use~~ are 7,858 tonnes CO₂ per year.

For new developments, the exact types of buildings typically are unknown. As such, not all building categories that may actually exist in Landmark Village at build-out are represented in this analysis. However, all of the commercial building area is accounted for and the best available assessment of the building type composition for the proposed project was used in estimating future GHG emissions. Additionally, although it is unknown exactly how the buildings will be designed, each building will be Title 24 compliant. Therefore, all design features of any future buildings that would make a building less energy efficient would be offset by design features that make the building more energy efficient.

(c) Mobile Source Emissions

The mobile source emissions considered for this project would be from the typical daily operation of motor vehicles by Landmark Village residents. Operational emissions from new residences are considered to be growth, as residences are rarely removed from the housing supply once constructed.⁵³ However, as previously discussed, the increase of new GHG emissions is caused by population growth. Therefore, it is not clear that commercial development should be considered new growth for vehicular travel purposes.

To the extent that commercial development serves existing residential development, its vehicular travel may not be new. In fact, if the new commercial area serves an area with a high residential/commercial balance, then this new commercial growth may reduce shopping and work trip lengths, thereby reducing GHG emissions associated with mobile sources. And, to the extent that new commercial development serves new residential development, much of the commercial vehicle travel already would be counted in the evaluation of the new residential development. If, however, the new commercial area results in longer

⁵³ There are exceptions, such as when one housing development replaces another, and, in those cases, the replacement residential development need not be considered growth.

Accordingly, the calculations and results presented for the life-cycle emissions vary based on input assumptions and assessment boundaries (e.g., how far back to trace the origin of a material). Assumptions made in this analysis generally are conservative. However, due to the open-ended nature of life-cycle emissions analysis, the analysis presented is not exact and may be highly uncertain.

(54) Impacts in Context

A summary of the proposed project's emissions is presented below in **Table 4.23-4**. In addition, this table depicts to what extent the proposed project exceeds the CARB 2020 NAT scenario.

As depicted in Table 4.23-4, the proposed project would increase existing emissions levels by 21,291 tonnes of CO₂e/year above existing, on-site conditions, which conservatively are assumed to be zero. (But see, *supra*, discussion of existing emission levels on the project site, which are upwards of roughly 553 metric tons of CO₂e per year.) While this numeric increase (i.e., approximately 21,291 tonnes) represents an obvious change to existing, on-site conditions (of roughly 553 tonnes), the increase, alone, is not sufficient to support a significance determination because of the absence of scientific and factual information regarding when particular quantities of greenhouse gas emissions become significant (as climate change is a global issue). Accordingly, and as discussed further below, the analysis also considers whether the proposed project's emissions (i.e., 21,291 tonnes of CO₂e/year) would impede the State of California's compliance with the statutory emissions reduction mandate established by AB 32.

As previously discussed, in order for California to return to 1990 levels by 2020 and achieve the emission reduction mandates of AB 32, the CARB 2020 NAT scenario must be improved upon by at least 29 percent. The CARB 2020 NAT scenario relies on specific assumptions such as electricity generation, vehicle fuel efficiency, and building energy efficiency codes. In particular, the CARB 2020 NAT scenario assumes that all new electricity generation will be supplied by natural gas plants, building energy efficiency codes are held at the 2005 Title 24 standards, and vehicle fuel efficiency is not affected by any regulatory action. As shown below, the proposed project's emissions have been reduced more than 29 percent below the CARB 2020 NAT scenario; ~~therefore, project impacts are less than significant.~~ Therefore, the project would not impede compliance with the GHG emission reductions mandated in AB 32. As such, the proposed project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, and impacts would be less than significant.

(a) Comparison With Executive Order S-03-05 2050 Goal:

As previously discussed, Executive Order S-03-05 mandates that California emit 80 percent less GHGs in 2050 than it emitted in 1990. As of 2004, California was emitting 12 percent more GHG emissions than in 1990. For California to emit 80 percent less than it emitted in 1990, the emissions would need to be only 18

percent of the 2004 emissions. Accounting for a population growth from 35,840,000 people in 2004 to approximately 55,000,000 people in 2050, the emissions per capita would have to be only 12 percent of what they were in 2004. This means 88 percent reductions in per capita GHG emissions from today's emissions intensities must be realized in order to achieve California's 2050 GHG goals.

CARB's Scoping Plan provides insight as to how it anticipates California will achieve the 2050 reduction goal in Governor Schwarzenegger's Executive Order S-03-05:

*Reducing our greenhouse gas emissions by 80 percent will require California to **develop new technologies** that dramatically reduce dependence on fossil fuels, and **shift into a landscape of new ideas, clean energy, and green technology**. The measures and approaches in this plan are designed to accelerate this necessary transition, promote the rapid development a cleaner, low carbon economy, create vibrant livable communities, and improve the ways we travel and move goods throughout the state. (Climate Change Proposed Scoping Plan: A Framework For Change, California Air Resources Board (adopted December 2008), p. ES-2; emphasis added.)*

[T]he measures needed to meet the 2050 goal are too far in the future to define in detail . . . (Ibid.)

methods needed for California to achieve the 2050 reduction goal identified in Governor Schwarzenegger's Executive Order S-03-05, the impact of the proposed project on the 2050 reduction goal is considered too speculative to assess at this time. (See Cal. Code Regs., tit. 14, sec. 15145.)

(b) Plan, Policy and Regulation Consistency

As previously discussed, Appendix G of the CEQA Guidelines has been revised to include criteria applicable to greenhouse gas emissions. One criterion asks whether the project would "conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases." As discussed further below, the proposed project would not conflict with any adopted plan, policy or regulation; therefore, the project's impacts are less than significant with respect to this criterion.

- CARB Scoping Plan – The proposed project would comply with all applicable regulations adopted by CARB and other regulatory agencies to implement the Scoping Plan pursuant to AB 32.
- Executive Order S-3-05 – The proposed project, through implementation of project design features, would not impede achievement of the statewide goal of reducing GHG emissions to 1990 levels by 2020.
- California Code of Regulations, Title 24 – The proposed project would exceed the 2008 Title 24 standards by 15 percent, thereby demonstrating a commitment to the energy efficient design, construction and operation of residential and non-residential structures.
- Senate Bill 375 – The proposed project is a mixed-use development and is consistent with the objective of SB 375 to improve land use planning decisions at the local level by locating a mix of land uses in close proximity to one another and transit options.
- Reduction Strategies – As demonstrated below, the proposed project is consistent with various reduction strategies recommended by the California Attorney General's Office and Climate Action Team for purposes of reducing greenhouse gas emissions.

At present time, the County of Los Angeles has adopted a Countywide Energy and Environmental Policy and three ordinances designed to implement the Green Building Program. The proposed project would comply with these County-mandated programs and ordinances; as such, the project would be consistent with plans, policies or regulations adopted by local governments to reduce GHG emissions.

In summary, in light of the project's consistency with the state and local programs and efforts identified above, the project's impacts are not significant under the referenced criterion.

7. MITIGATION MEASURES

a. Application of Project Design Features to Newhall Ranch, Including Landmark Village, to Reduce GHG Emissions

The project applicant considered potential project design features during preparation of the Newhall Ranch Specific Plan and the first village within Newhall Ranch—the Landmark Village project.⁷³ As shown below, Landmark Village, as with all of Newhall Ranch, would incorporate the components of a sustainable community, including the following:⁷⁴

- **Mix of Land Uses.** Landmark Village, along with the other villages in Newhall Ranch, will include a broad range of housing types, including affordable housing, along with commercial, office, and public facilities. As to Landmark Village, a diverse range of 1,444 homes (308 single-family and 1,136 multi-family units) would be provided. To minimize and shorten vehicle trips, most homes will be within walking distances to the Landmark Village community's commercial and mixed-use areas, elementary school site, community park, and trail system. Finally, Landmark Village is located adjacent to the Valencia Commerce Center, one of the largest employment centers in the Santa Clarita Valley. Bike and pedestrian trails within Newhall Ranch and Landmark Village will connect to trails within the Valencia Commerce Center, further reducing automobile usage.
- **Provision of Jobs.** A portion of Newhall Ranch's approximately 20,000 new jobs would be created through build-out Landmark Village's mixed-use and commercial areas. Newhall Ranch is adjacent to the existing Valencia Gateway (which includes the Valencia Commerce Center), which presently provides 50,000 jobs. Other development within Valencia Gateway will create an additional 30,000 jobs. When completed, the job centers in Newhall Ranch and Valencia will have resulted in the creation of approximately 100,000 jobs in the Santa Clarita Valley. A balanced jobs-housing base is a critical component to a sustainable community because it allows people to work close to home and minimizes vehicle miles traveled.

⁷³ When crafting Landmark Village's project design features, and identifying feasible mitigation measures (as discussed later in the subsection), the project applicant referenced the Office of the California Attorney General's "whitepaper" on mitigation measures and global warming resources, which was last revised on September 25, 2007. This document is available for public inspection and review at Los Angeles County Department of Regional Planning, 320 West Temple Street, Los Angeles, California 90012, and is incorporated by reference.

⁷⁴ See also the "Sustainability in Action: Landmark Village" summary issued by the project applicant in 2007. The sustainable community design components include the green building program, water conservation, renewable energy, reduced impermeable surfaces/water re-use, walkability, recreation, protection of natural resources, transportation solutions, and the economic structure. This report is located in **Appendix 4.23** of the Recirculated EIR.

Parks, Recreation, and Trails:

Mitigation Measures SP 4.20-1, SP 4.20-2

Electricity/Utilities:

Mitigation Measure SP 4.14-1

Additional Conditions of Approval:

Condition (g)

c. Project Design Features Incorporated as Mitigation Measures by This EIR

As identified and described in the inventory of GHG emissions that would result from Landmark Village, the project includes numerous project design features that lessen Landmark Village's estimated emissions total. In order to ensure that these project design features are implemented, they are recommended here as specific mitigation measures. Therefore, if approved, these project design features/mitigation measures would become part of the legally enforceable mitigation monitoring and reporting program, required by CEQA, for Landmark Village.

These mitigation measures are in addition to those adopted in the previously certified Newhall Ranch Specific Plan Program EIR. To indicate that the measures relate specifically to the Landmark Village project, each measure is preceded by "LV," which stands for Landmark Village.

LV 4.23-1 All residential buildings on the project site that are enabled by approval of the proposed project shall be designed to provide improved insulation and ducting, low E glass, high efficiency air conditioning units, and radiant barriers in attic spaces, as needed, or equivalent to ensure that all residential buildings operate at levels 15 percent better than the standards required by the 2008 version of Title 24. ~~applicable at the time the building permit applications are filed.~~ Notwithstanding this measure, all residential buildings shall be designed to comply with the then-operative Title 24 standards applicable at the time building permit applications are filed. For example, if new standards are adopted that supersede the 2008 Title 24 standards, the residential buildings shall be designed to comply with those newer standards and, if necessary, exceed those standards by an increment that is equivalent to a 15 percent exceedance of the 2008 Title 24 standards.

LV 4.23-2 All commercial and public buildings on the project site that are enabled by approval of the proposed project shall be designed to provide improved insulation and ducting, low E glass, high efficiency HVAC equipment, and energy efficient lighting design with occupancy sensors, as needed, or equivalent to ensure that all commercial and public

buildings operate at levels 15 percent better than the standards required by the 2008 version of Title 24 applicable at the time the building permit applications are filed. Notwithstanding this measure, all nonresidential buildings shall be designed to comply with the then-operative Title 24 standards applicable at the time building permit applications are filed. For example, if new standards are adopted that supersede the 2008 Title 24 standards, the nonresidential buildings shall be designed to comply with those newer standards and, if necessary, exceed those standards by an increment that is equivalent to a 15 percent exceedance of the 2008 Title 24 standards.

LV 4.23-3 The project applicant or designee shall produce or cause to be produced ~~or purchase~~ renewable electricity, or secure greenhouse gas offsets or credits from a public agency (e.g., CARB; SCAQMD) endorsed market, equivalent to the installation of one ~~2.0 kilowatt~~ photovoltaic (i.e., solar) power system no smaller than 2.0 kilowatts, when undertaking the design and construction of each single-family detached residential unit on the project site. ~~that is enabled by approval of the proposed project; or, at the applicant's option, prior to commencing construction, the applicant shall secure offsets or credits for carbon dioxide equivalents from either the Climate Action Reserve of the California Climate Action Registry, the Chicago Climate Exchange, or similar reserve/exchange; or, alternatively, at the applicant's option, the applicant may pay to the South Coast Air Quality Management District (District) the equivalent amount of funds that would be due to buy credits from the Climate Action Reserve, Chicago Climate Exchange, or similar reserve/exchange for greenhouse gas emission mitigation purposes. In any case, installation of individual photovoltaic systems shall be considered when undertaking the design and construction of single family residential units on the project site.~~

LV 4.23-4 The project applicant or designee shall produce or cause to be produced ~~or purchase~~ renewable electricity, or secure greenhouse gas offsets or credits from a public agency (e.g., CARB; SCAQMD) endorsed market, equivalent to the installation of one ~~2.0 kilowatt~~ photovoltaic (i.e., solar) power system no smaller than 2.0 kilowatts, on each 1,600 square feet of nonresidential roof area provided on the project site. ~~; or, at the applicant's option, prior to commencing construction, the applicant shall secure offsets or credits for carbon dioxide equivalents from either the Climate Action Reserve of the California Climate Action Registry, the Chicago Climate Exchange, or similar reserve/exchange; or, alternatively, at the applicant's option, the applicant may pay to the South Coast Air Quality Management District (District) the equivalent amount of funds~~

~~that would be due to buy credits from the Climate Action Reserve, Chicago Climate Exchange, or similar reserve/exchange for greenhouse gas emission mitigation purposes. In any case, installation of individual photovoltaic systems shall be considered when undertaking the design and construction of nonresidential buildings on the project site.~~

- LV 4.23-5 Consistent with the Governor's Million Solar Roofs Plan, the project applicant or designee, acting as the seller of any single-family residence constructed as part of the development of at least 50 homes that are intended or offered for sale, shall offer a solar energy system option to all customers that enter negotiations to purchase a new production home constructed on land for which an application for a tentative subdivision map has been deemed complete. The seller shall disclose the total installed cost of the solar energy system option, and the estimated cost savings.
- LV 4.23-6 The project applicant shall use solar water heating for all pools located at the Landmark Village recreation centers.
- LV 4.23-7 The project applicant, in accordance with Los Angeles County requirements, will design and construct the approximately 11,000 square feet fire station so as to achieve LEED silver certification.⁷⁵

⁷⁵ LEED certification is a performance-oriented rating system whereby building projects earn points for satisfying criterion designed to address environmental impacts inherent in the design, construction, operation and management of building. LEED silver certification is awarded to buildings that obtain approximately half of the overall possible LEED points. Therefore, it may be appropriate to assume that a LEED silver building would obtain half of the possible points in the "optimize energy performance" category. To obtain half of the possible energy points, a building would need to be approximately 30 percent better than the 2005 Title 24 standards. Greenhouse gas emission reductions associated with the LEED silver certification requirement for Los Angeles County buildings were not quantitatively accounted for in this analysis due to ambiguities concerning the precise emissions savings from LEED certification. (See *Green Buildings*, County of Los Angeles, available at http://green.lacounty.gov/green_buildings.asp.) (This document is available for public inspection and review at Los Angeles County Department of Regional Planning, 320 West Temple Street, Los Angeles, California 90012, and is incorporated by reference.)

**Table 4.23-5
Summary of Landmark Village Global Climate Change Mitigation Measures**

Mitigation Measure	Compliance Method
4.23-1: Residential Buildings 15% Percent Better Than Title 24	Design features may include, but are not limited to, improved insulation and ducting, low E glass, high efficiency air conditioning units, and radiant barriers in attic spaces.
4.23-2: Nonresidential Buildings 15% Percent Better Than Title 24	Design features may include, but are not limited to, improved insulation and ducting, low E glass, high efficiency HVAC equipment, and energy efficient lighting design with occupancy sensors or equivalent.
4.23-3: Renewable Electricity for Single-Family Residences	Renewable electricity may be provided via, but is not limited to, solar power; alternatively, carbon offsets or credits may be purchased.
4.23-4: Renewable Electricity for Nonresidential Buildings	Renewable electricity may be provided via, but is not limited to, solar power; alternatives, carbon offsets or credits may be purchased.
4.23-5: Governor's Million Solar Roofs Plan	Project applicant shall offer solar energy system option to prospective purchases of single-family residences under the terms mandated by the Governor's Million Solar Roofs Plan.
4.23-6: Solar Water Heating for Pools	Each of the pools located at the recreation centers would be heated via solar power.
4.23-7: LEED Silver Certification for Fire Station	Compliance with LEED standards, which would require the fire station to obtain approximately half of the overall LEED points.

In addition to the ~~seven~~ ~~six~~ global climate change mitigation measures identified above, mitigation measures recommended in connection with other sections (*i.e.*, air quality; biological resources; traffic) of the Landmark Village Draft and Recirculated EIRs would reduce the proposed project's GHG emissions and/or improve the project's capacity to respond to the uncertain effects of global climate change. As these measures are recommended for adoption and incorporation into a mitigation monitoring and reporting program, these measures can be relied upon in this analysis as feasible measures designed to reduce GHG emissions and the impact of global climate change on the project.

(21) Environmental Safety

The potential environmental safety impacts relative to development of the Landmark Village project site include soil contamination attributable to past and present agricultural activities, on-site petroleum (i.e., oil) drilling and pipeline activities, and the disposal of on-site hazardous materials debris. Future residents of either the proposed project or Alternative 3 could be subjected to these potential hazards unless remediated. For these reasons, Alternative 3 would result in impacts similar to the proposed project with respect to environmental safety.

(22) Cultural/Paleontological Resources

This alternative would result in a smaller development footprint and requires less off-site grading near to known archaeological and paleontological resources than does the proposed project. As such, the potential for disturbance to known cultural/paleontological resources during construction activities would be reduced when compared to the proposed project. For this reason, Alternative 3 would result in impacts lesser than the proposed Landmark Village project with respect to cultural/paleontological resources.

(23) Global Climate Change

Under this alternative, construction-related greenhouse gas (GHG) emissions would be reduced, as compared to the proposed project, because less grading and imported fill would be required to elevate the site out of the floodplain. Additionally, operational-related GHG emissions would be less because of this alternative's reduction in the number of residential units and recreational areas, and amount of commercial square footage. For example, the smaller quantity of land use development contemplated by this alternative would lessen the amount of building-related emissions, including those associated with water and energy use, and mobile source-related emissions. While impacts of the proposed project on global climate change are less than significant, in light of the overall reduction in GHG emissions, Alternative 3 would result in fewer impacts than the proposed project.

(24) Conclusion on Environmental Analyses

Generally, under Alternative 3, impacts associated with geotechnical and soil resources, hydrology, traffic/access, air quality, global climate change, noise, biota, cultural/paleontological resources, visual qualities, solid waste services, mineral resources, and floodplain modifications would be reduced when compared to the proposed project. On the other hand, this alternative would have greater impacts associated with water service, water quality, and parks and recreation. However, on balance, Alternative 3 would result in fewer impacts than the proposed project. A summary comparison of impacts associated with the project alternatives is provided later in this section in **Table 5.0-3, Alternatives Impact Comparison Matrix**.

e. Analysis of Project Objectives

While Alternative 3 is considered environmentally superior to the proposed project, Alternative 3 does not meet many of the basic project objectives, which are set forth in this EIR, at **Section 1.0, Project Description**. Project objectives not fully met or impeded by Alternative 3 are listed below.

(1) Land Use Planning Objectives

Land Use Planning Objective No. 2 states, “Consistent with the Specific Plan, accommodate projected regional growth in a location that is adjacent to existing and planned infrastructure, urban services, transportation corridors, and major employment centers and that avoids leapfrog development.”

(v) Cultural/Paleontological Resources

This alternative would result in a smaller development footprint and requires less off-site grading than does the proposed project. As such, the potential for disturbance to known archaeological and paleontologic resources during construction activities would be reduced when compared to the proposed project. For this reason, Alternative 4 would result in fewer impacts than the proposed Landmark Village project with respect to cultural/paleontological resources.

(w) Global Climate Change

Under this alternative, construction-related GHG emissions would be reduced, as compared to the proposed project, because less grading and imported fill would be required due to the overall reduction in the size of the development footprint. Additionally, operational-related GHG emissions would be less because of this alternative's reduction in the number of residential units and recreational areas, and amount of commercial square footage. For example, the smaller quantity of land use development contemplated by this alternative would lessen the amount of building-related emissions, including those associated with water and energy use, and mobile source-related emissions. While impacts of the proposed project on global climate change are less than significant, in light of the overall reduction in GHG emissions, Alternative 4 would result in fewer impacts than the proposed project.

(x) Conclusion on Environmental Analyses

Generally, under Alternative 4, impacts associated with geotechnical and soil resources, hydrology, traffic/access, air quality, global climate change, noise, biota, cultural/paleontological resources, visual qualities, solid waste services, parks and recreation, mineral resources, and floodplain modifications would be reduced when compared to the proposed project. On the other hand, this alternative would have greater impacts associated with water service and water quality. However, on balance, Alternative 4 would result in fewer impacts than the proposed project. A summary comparison of impacts associated with the project alternatives is provided in **Table 5.0-3, Alternatives Impact Comparison Matrix**.

**Table 5.0-3
Alternatives Impact Comparison Matrix**

Environmental Topic	Alternative 1 No Project/No Development	Alternative 2 No Project/Future Development	Alternative 3 FEMA Floodplain Avoidance	Alternative 4 Cluster
Geotechnical and Soil Resources	L	S	L	L
Hydrology	L	S	L	L
Traffic/Access	L	S	L	L
Air Quality	L	S	L	L

Environmental Topic	Alternative 1 No Project/No Development	Alternative 2 No Project/Future Development	Alternative 3 FEMA Floodplain Avoidance	Alternative 4 Cluster
Noise	L	S	L	L
Biota	L	S	L	L
Cultural/Paleontological Resources	L	S	L	L
Visual Qualities	L	S	L	L
Water Service	L	S	G ¹	G ¹
Wastewater Disposal	L	S	S	S
Solid Waste Services	L	S	L	L
Education	L	S	S	S
Library Services	L	S	S	S
Fire Protection Services	L	S	S	S
Parks and Recreation	L	S	G	L
Water Quality	S	S	G	G
Agricultural Resources	L	S	S	S
Sheriff Services	L	S	S	S
Environmental Safety	L	S	S	S
Mineral Resources	L	S	L	L
Floodplain Modifications	L	S	L	L
Utilities	L	S	S	S
<u>Global Climate Change</u>	<u>L</u>	<u>S</u>	<u>L</u>	<u>L</u>

KEY (Level of Impact in Comparison to the Proposed Project):

G = Alternative Produces Greater Level of Impact.

S = Alternative Produces Similar Level of Impact.

L = Alternative Produces Lesser Level of Impact.

¹ If long-term agricultural uses in conjunction with the project's urban uses are not feasible, water usage would be less than the proposed project.

(2) Analysis of Project Objectives

While Alternative 4 is considered environmentally superior to the proposed project, Alternative 4 does not meet many of the basic project objectives, which are set forth in this EIR, at **Section 1.0, Project Description**. Project objectives not fully met or impeded by Alternative 4 are listed below.

(a) Land Use Planning Objectives

Land Use Planning Objective No. 2 states, “Consistent with the Specific Plan, accommodate projected regional growth in a location that is adjacent to existing and planned infrastructure, urban services, transportation corridors, and major employment centers and that avoids leapfrog development.”

Because Alternative 4 would significantly reduce housing and commercial uses, and, therefore, reduce accommodations for projected regional growth, this alternative is not consistent with this project objective.

8.0 MITIGATION MONITORING PLAN

Landmark Village Mitigation Monitoring Plan		- September 2011	
Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency
			2. Monitoring Agency
			3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES			
SP 4.1-1. The standard building setbacks from ascending and descending man-made slopes are to be followed in accordance with Section 1806.4 of the <u>Los Angeles County Building Code</u> , unless superseded by specific geologic and/or soils engineering evaluations. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 44)	Applicant (Civil Engineer, Geotechnical Engineer, Engineering Geologist)	Building and Grading Plan Check	1. LACDPW, Geology/Soils Section, and Building and Safety
			2. LACDPW, Building and Safety and Geology/Soils Section
			3. Prior to Issuance of Building Permits
SP 4.1-2. The existing Grading Ordinance for planting and irrigation of cut-slopes and fill slopes is to be adhered to for grading operations within the project site. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 44)	Applicant (Civil Engineer)	Field Verification	1. LACDPW, Building and Safety
			2. LACDPW, Building and Safety
			3. Prior to Issuance of Occupancy Permits
SP 4.1-3. In order to safeguard against major seismic-related structural failures, all buildings within the project boundaries are to be constructed in conformance with the Los Angeles County <u>Uniform Building Code</u> , as applicable.	Applicant (Project Structural Engineer)	Building Plan Check	1. LACDPW, Building and Safety
			2. LACDPW, Building and Safety
			3. Prior to Issuance of Building Permits
SP 4.1-4. The location and dimensions of the exploratory trenches and borings undertaken by Allan E. Seward Engineering Geology, Inc. and R.T. Frankian & Associates are to be noted on all grading plans relative to future building plans, unless the trenches and/or borings are removed by future grading operations. If future foundations traverse the trenches or borings, they are to be reviewed and approved by the project Geotechnical Engineer. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 45)	Applicant (Geotechnical Engineer)	Grading Plan Check	1. LACDPW, Geology/Soils Section
		Field Verification	2. LACDPW, Geology/Soils Section
			3. Prior to Approval of Final Grading Plans; grading

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<p>SP 4.1-5 Wherever the Pacoima Formation is exposed, it may be potentially expansive; therefore, it is to be tested by the project soils engineer at the grading plan stage to determine its engineering characteristics and mitigation requirements, as necessary. <i>(This mitigation measure is not applicable because there is no Pacoima Formation on the tract map site or the borrow sites .)</i></p>	<p>Not applicable.</p>		
<p>SP 4.1-6. Should any expansive soils be encountered during grading operations, they are not to be placed nearer the finished surface than 8 feet below the bottom of the subgrade elevation. This depth is subject to revision depending upon the expansive potential measured during grading. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Investigation</p>	<p>1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. During Grading</p>
<p>SP 4.1-7. If expansive materials are encountered at subgrade elevation in cut areas, the soils are to be removed to a depth of 8 feet below the "finished" or "subgrade" surface and the excavated area backfilled with nonexpansive, properly compacted soils. This depth is subject to revision depending upon the expansive potential measured during grading. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Investigation</p>	<p>1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. During Grading</p>
<p>SP 4.1-8. At the time of subdivision, which allows construction, areas subject to liquefaction are to be mitigated to the satisfaction of the project Geotechnical Engineer prior to site development. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Grading Plan Check</p>	<p>1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section</p>
<p>SP 4.1-9. Subdrains are to be placed in areas of high ground water conditions (Potrero Canyon, in particular) or wherever extensive irrigation is planned. The systems are to be designed to the specifications of the Newhall Ranch Specific Plan Geotechnical Engineer.</p>	<p>Applicant (Geotechnical Engineer and Engineering Geologist)</p>	<p>Field Verification</p>	<p>3. Prior to Issuance of Grading Permit(s)</p>
<p>SP 4.1-10. Subdrains are to be placed in the major and minor canyon fills, behind stabilization blankets, buttress fills, and retaining walls, and as required by the Geotechnical Engineer during grading operations. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p>	<p>Applicant (Geotechnical Engineer and Engineering Geologist)</p>	<p>Grading Plan Check</p>	<p>1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section</p>
		<p>Field Verification</p>	<p>3. Prior to Issuance of Grading Permit and Verify During Grading</p>

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<p>SP 4.1-11 Canyon subdrains may be installed in "V"-ditches or in a rectangular trench excavated to expose competent material or bedrock as approved by the geotechnical engineer. <i>(This mitigation measure applies to the Canyon fills proposed in the Adobe Canyon borrow site and is therefore not applicable.)</i></p>	<p>Not applicable.</p>		
<p>SP 4.1-12. The vertical spacing of subdrains behind buttress fills, stabilization blankets, etc., are to be a maximum of 15 feet. The gradient is to be at least 2 percent to the discharge end. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Grading Plan Check</p>	<p>1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section</p>
<p>SP 4.1-13. Geological materials subject to hydroconsolidation (containing significant void space) are to be removed prior to the placement of fill. Specific recommendations relative to hydroconsolidation are to be provided by the project Geotechnical Engineer at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 44)</p>	<p>Applicant (Geotechnical Engineer and Engineering Geologist)</p>	<p>Receipt of Specific Hydro-consolidation Recommendations</p>	<p>1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. Prior to Issuance of Grading Permit and Verify During Grading</p>
<p>SP 4.1-14 Proposed structures on ridgelines will have a minimum 20-foot horizontal setback from the margin of the bedrocks to prevent perched or ground water levels where relatively impermeable materials can block downward migration. <i>(This mitigation measure is not applicable to the Landmark Village project. The measure calls for proposed "structures on ridgelines" to have minimum horizontal setback requirements; however, the Landmark Village project does not propose construction of structures on any ridgelines due to the topographic conditions found on the site.)</i></p>	<p>Not applicable.</p>		
<p>SP 4.1-15. Subsurface exploration is required to delineate the depth and lateral extent of the landslides shown on the geologic map. This work shall be undertaken at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 15) Landslides must be mitigated through stabilization, removal, and/or building setbacks as determined by the Newhall Ranch Specific Plan Geotechnical Engineer, and to the satisfaction of the Los Angeles County Department of Public Works.</p>	<p>Applicant (Geotechnical Engineer and Engineering Geologist)</p>	<p>Receipt of Exploratory Data and Mitigation</p>	<p>1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section</p>
		<p>Field Verification</p>	<p>3. Prior to Approval of Final Grading Plan and Verify During Grading</p>

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<p>SP 4.1-16 At the subdivision stage, the existence of landslides designated with “3” on Figure 4.1-2, Existing Landslide Areas, and within or adjacent to the development area is to be confirmed. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 15.) If landslides are confirmed in these areas, they are to be mitigated through stabilization, removal, and/or building setbacks as determined by the Newhall Ranch Specific Plan geotechnical engineer. <i>(This mitigation measure is not applicable to the Landmark Village project. The measure refers to the “existence of landslides” designated with a “3” on Figure 4.1-2 contained in the Newhall Ranch Specific Plan Program EIR. There are no such designated landslides within the boundaries of the Landmark Village tract map and borrow sites.)</i></p>	<p>Not applicable.</p>		
<p>SP 4.1-17 The existence, or lack thereof, of landslides on or adjacent to the roadway alignments for the extension of Magic Mountain Parkway and Valencia Boulevard will be evaluated by subsurface investigations at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, p. 11.) If landslides are confirmed in these areas, they are to be mitigated through stabilization, removal, and/or building setbacks as determined by the Newhall Ranch Specific Plan geotechnical engineer. <i>(This mitigation measure is not applicable to the Landmark Village project. The measure refers to “landslides” on or adjacent to roadway alignments, which are not located within the boundaries of the Landmark Village project, including the off-site grading areas.)</i></p>	<p>Not applicable.</p>		
<p>SP 4.1-18 The potential hazards associated with debris flow scars and other possible surficial failures located in proximity to the roadway alignments for the extension of Magic Mountain Parkway and Valencia Boulevard will be evaluated at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, p. 11.) These areas are to be mitigated as determined by the Newhall Ranch Specific Plan geotechnical engineer. <i>(This mitigation measure is not applicable to the Landmark Village project. The measure refers to “debris flow scars and other possible surficial failures” located in proximity to roadway alignments, which are not located within the boundaries of the Landmark Village project, including the off-site grading areas.)</i></p>	<p>Not applicable.</p>		
<p>SP 4.1-19. Remove debris from surficial failures during grading operations prior to the placement of fill. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 16)</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. During Grading Operations</p>
<p>SP 4.1-20. All soils and/or unconsolidated slopewash and landslide debris is to be removed prior to the placement of compacted fills. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 45)</p>	<p>Applicant (Geotechnical Engineer and Engineering Geologist)</p>	<p>Grading Plan Check Field Verification</p>	<p>1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. Prior to approval of Final Grading Plan and During Grading</p>

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<p>SP 4.1-21 Cut-slopes, which will expose landslide material, are to undergo geologic and geotechnical evaluation at the subdivision stage to determine their stability and degree of consolidation. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 15.) Several options are available to mitigate potential landslide failure in the proposed cut-slopes. Landslides may be stabilized with buttress fills or shear keys designed by the Newhall Ranch Specific Plan geotechnical engineer; landslide material can be entirely removed and replaced with a stability fill; or the slope can be redesigned to avoid the landslide. Landslides underlying cut pad or road areas may be removed or partially removed if the Newhall Ranch Specific Plan Geologist and geotechnical engineer conclude that the landslide is stable and sufficiently consolidated to build on. Landslides located on ascending natural slopes above proposed graded areas will also require evaluation for stability. Unstable landslides on natural slopes above graded areas will either require stabilization, removal, or building setbacks to mitigate potential hazards. <i>(This mitigation would apply to the revised access road proposed to replace the existing Edison road to the power line tower involves creating small cut slopes in landslide material.)</i></p>	<p>Not applicable.</p>		
<p>SP 4.1-22 Additional geologic investigations are required prior to approval of future tentative maps which allow construction, or grading plans to determine the geologic and geotechnical feasibility of the fifteen (15) lots proposed in the High Country Special Management Area (SMA). <i>(This mitigation measure is not applicable to the Landmark Village project. The measure refers to the 15 lots proposed in the High Country SMA, which is not located within the boundaries of the Landmark Village project site, including the off-site grading areas.)</i></p>	<p>Not applicable.</p>		
<p>SP 4.1-23 Prior to construction of the road embankment located within landslide Qls II, a compacted fill shear key will be constructed at the property boundary. (R.T. Frankian & Associates, 19 September 1994, p. 6.) <i>(This mitigation measure is not applicable to the Landmark Village project. The measure refers to a specific road embankment, which is not located within the boundaries of the Landmark Village project site, including the off-site grading areas.)</i></p>	<p>Not applicable.</p>		
<p>SP 4.1-24 Landslides, which will not affect the proposed grading concept, are to be placed in Restricted Use Areas on the Final Maps. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 43.) <i>(This mitigation measure is not applicable because landslides in and immediately adjacent to the borrow sites are required by LACDPW to be placed in restricted use areas until site-specific geotechnical elevations are completed and proposed mitigation is recommended.)</i></p>	<p>Not applicable.</p>		
<p>SP 4.1-25 Surficial stability of cut-slopes designated with a "G" are to be fully evaluated at the subdivision stage, due to the possibility of wedge failures or surficial material in the slope. Corrective grading measures are to be presented in detail as mitigation at both the subdivision and Grading Plan stages of development. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, pp. 17, 43.) <i>(This mitigation measure is not applicable to the Landmark Village project. The measure refers to "surficial stability" of certain designated cut-slopes, which are not located within the boundaries of the Landmark Village project site, including the off-site grading areas.)</i></p>	<p>Not applicable.</p>		

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<p>SP 4.1-26 Cut slopes designated as "P" are potentially unstable and are to be fully evaluated at the subdivision stage to ascertain whether they are stable as designed. Corrective grading measures are to be presented in detail as mitigation at both the subdivision and Grading Plan stages of development. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, pp. 17, 43.) <i>(This mitigation measure is not applicable to the Landmark Village project. The measure refers to "potentially unstable" designated cut slopes, which are not located within the boundaries of the Landmark Village project site, including the off-site grading areas.)</i></p>	<p>Not applicable.</p>		
<p>SP 4.1-27 Cut-slopes designated with a "U" are to be further investigated at the subdivision stage to confirm underlying geologic conditions and slope stability. Corrective grading measures are to be presented in detail as mitigation at both the subdivision and Grading Plan stages of development. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, pp. 17, 43.) <i>(This mitigation measure is not applicable to the Landmark Village project. The measure refers to designated "cut-slopes" requiring further investigation at the subdivision stage, which are not located within the boundaries of the Landmark Village project site, including the off-site grading areas.)</i></p>			
<p>SP 4.1-28 Cut-slopes associated with the construction of the proposed extensions of Magic Mountain Parkway and Valencia Boulevard are to be further investigated at the subdivision stage to confirm the underlying geologic conditions and slope stability. Corrective measures are to be required if it is determined that the cut-slopes will not be stable. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, pp. 11 and 12.) <i>(This mitigation measure is not applicable to the Landmark Village project. The measure refers to "cut-slopes" associated with construction of certain proposed road extensions, which are not located within the boundaries of the Landmark Village project site, including the off-site grading areas.)</i></p>	<p>Not applicable.</p>		
<p>SP 4.1-29. Orientations of the bedrock attitudes are to be evaluated by the Newhall Ranch Specific Plan Engineering Geologist to identify locations of required buttress fills. Buttress fill design and recommendations, if necessary, are to be presented as mitigation during the grading plan stage. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p>	<p>Applicant (Geotechnical Engineer and Engineering Geologist)</p>	<p>Grading Plan Check</p>	<p>1. LACDPW, Geology/Soils Section</p>
		<p>Field Verification</p>	<p>2. LACDPW, Geology/Soils Section 3. Prior to Approval of Final Grading Plans</p>
<p>SP 4.1-30. All fills, unless otherwise specifically designed, are to be compacted to at least 90 percent of the maximum dry unit weight as determined by ASTM Designation D 1557-91 Method of Soil Compaction. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section</p>
			<p>2. LACDPW, Geology/Soils Section</p>
			<p>3. During Grading</p>
<p>SP 4.1-31. No fill is to be placed until the area to receive the fill has been adequately prepared and approved by the Geotechnical Engineer. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety</p>
			<p>2. LACDPW, Geology/Soils Section, Building and Safety</p>
			<p>3. During Grading</p>

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SP 4.1-32. Fill soils are to be kept free of all debris and organic material. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading
SP 4.1-33. Rocks or hard fragments larger than 8 inches are not to be placed in the fill without approval of the Geotechnical Engineer, and in a manner specified for each occurrence. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading
SP 4.1-34. Rock fragments larger than 8 inches are not to be placed within 10 feet of finished pad grade or the subgrade of roadways or within 15 feet of a slope face. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading
SP 4.1-35. Rock fragments larger than 8 inches may be placed in windrows, below the limits given above, provided the windrows are spaced at least 5 feet vertically and 15 feet horizontally. Granular soil must be flooded around windrows to fill voids between the rock fragments. The granular soil is to be wheel rolled to assure compaction. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading
SP 4.1-36. The fill material is to be placed in layers which, when compacted, is not to exceed 8 inches per layer. Each layer is to be spread evenly and is to be thoroughly mixed during the spreading to insure uniformity of material and moisture. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading

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SP 4.1-37. When moisture content of the fill material is too low to obtain adequate compaction, water is to be added and thoroughly dispersed until the soil is approximately 2 percent over optimum moisture content. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading
SP 4.1-38. When the moisture content of the fill material is too high to obtain adequate compaction, the fill material is to be aerated by blading or other satisfactory methods until the soil is approximately two percent over optimum moisture content. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading
SP 4.1-39. Where fills toe out on a natural slope or surface, a keyway, with a minimum width of 16 feet and extending at least 3 feet into firm, natural soil, is to be cut at the toe of the fill. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading
SP 4.1-40. Where the fills toe out on a natural or cut slope and the natural or cut slope is steeper than 5 horizontal to 1 vertical, a drainage bench with a width of at least 8 feet is to be established at the toe of the fill. Fills may be placed over cut slopes if the visible contact between the fill and cut is steeper than 45 degrees. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading
SP 4.1-41. When placing fills over slopes, sidewall benching is to extend into competent material, approved by the Geotechnical Engineer, with vertical benches not less than 4 feet. (R.T. Frankian & Associates, 19 September 1994, Appendix I) Competent material is defined as being free of loose soil, heavy fracturing, or compressive soils.	Applicant (Geotechnical Engineer and Engineering Geologist)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading

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<p>SP 4.1-42. When constructing fill slopes, the grading contractor is to avoid spillage of loose material down the face of the slope during the dumping and compacting operations. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>SP 4.1-43. The outer faces of fill slopes are to be compacted by backing a sheepsfoot compactor over the top of the slope, and thoroughly covering all of the slope surface with overlapping passes of the compactor. Compaction of the slope is to be repeated after each 4 feet of fill has been placed. The required compaction must be obtained prior to placement of additional fill. As an alternate, the slope can be overbuilt and cut back to expose a compacted core. (R.T. Frankian & Associates, 19 September 1994, Appendix I)</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>SP 4.1-44. All artificial fill associated with past petroleum activities as well as other existing artificial fill, are to be evaluated by the Newhall Ranch Specific Plan Geotechnical Engineer at the subdivision and/or Grading Plan Stage. (Allan E. Seward Engineering Geology, 19 September 1994, Inc., p. 45) Unstable fills are to be mitigated through removal, stabilization, or other means as determined by the Newhall Ranch Specific Plan Geotechnical Engineer.</p>	<p>Applicant (Geotechnical Engineer and Engineering Geologist)</p>	<p>Receipt of Geotechnical Evaluation Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Approval of Final Subdivision Maps or Grading Plans, and Verify During Grading</p>
<p>SP 4.1-45. Surface runoff from the future graded areas is not to run over any natural, cut, or fill slopes. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 20)</p>	<p>Applicant (Civil Engineer and Construction Superintendent)</p>	<p>Include this Measure in Specifications Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>

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SP 4.1-46. Runoff from future pads and structures is to be collected and channeled to the street and/or natural drainage courses via non-erosive drainage devices. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 20)	Applicant (Civil Engineer and Construction Superintendent)	Include this Measure in Specifications	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
		Field Verification	3. During Grading
SP 4.1-47. Water is not to stand or pond anywhere on the graded pads. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 20)	Applicant (Civil Engineer and Construction Superintendent)	Include this Measure in Specifications	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
		Field Verification	3. During Grading
SP 4.1-48. Oil and water wells that might occur on site are to be abandoned in accordance with state and local regulations. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 45)	Applicant (Well abandonment Specialist)	Receipt of Confirmation of Abandonment	1. California Department of Conservation, Division of Oil and Gas, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. Prior to Issuance of Grading Permits
SP 4.1-49. If any leaking or undocumented oil wells are encountered during grading operations, their locations are to be surveyed and the current well conditions evaluated immediately. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 21) Measures are to be taken to document the wells, abandonment, and remediate the well sites (if necessary) in accordance with state and local regulations.)	Applicant (Civil Engineer and Well Abandonment Specialist)	Include this Measure in Specifications	1. California Department of Conservation, Division of Oil and Gas, Building and Safety
			2. California Department of Conservation, Division of Oil and Gas, Building and Safety
		Field Verification	3. During Grading

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<p>SP 4.1-50. The exact status and location of the Exxon (Newhall Land & Farming) oil well #31 will be evaluated at the subdivision stage. If necessary, the well will be abandoned in accordance with state and local regulations. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, p. 12)</p>	Applicant	Locate Well #31 on Tract Map	1. California Department of Conservation, Division of Oil and Gas, Building and Safety
	(Civil Engineer and Well Abandonment Specialist)		2. California Department of Conservation, Division of Oil and Gas, Building and Safety
		Documentation of Abandonment, if applicable	3. Prior to Issuance of Grading Permit
<p>SP 4.1-51 Survey control will be required to precisely locate the Salt Creek and Del Valle Faults at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 33) <i>(This mitigation measure is not applicable to the Landmark Village project. The measure refers to certain faults, which are not located within the boundaries of the Landmark Village project site, including the off-site grading areas.)</i></p>	Not applicable.		
<p>SP 4.1-52 Additional subsurface trenching will be performed within the Holser Structural Zone on Newhall Ranch during the subdivision stage to evaluate its existence. Within Potrero Canyon, additional subsurface evaluation will be performed during the subdivision stage to confirm that nontectonic alluvial movement was the cause of surface ground cracking during the January 17, 1994 earthquake, and to evaluate the potential for shallow-depth faults. (Allan E. Seward Engineering Geology, Inc. 19 September 1994, p. 42, as revised above.) <i>(This mitigation measure is not applicable to the Landmark Village project. The measure refers to subsurface trenching and additional subsurface evaluation required on areas of Newhall Ranch, which are not located within the boundaries of the Landmark Village project site, including the off-site grading areas.)</i></p>	Not applicable.		
<p>SP 4.1-53 Precise Building Setback Zones for the Newhall Ranch Specific Plan site are to be defined at the subdivision stage. <i>(This mitigation measure is not applicable to the Landmark Village project. The measure refers to "precise building setback zones," which are not applicable to the Landmark Village project site, including the off-site grading areas.)</i></p>			
<p>SP 4.1-54 Due to the potential activity of the Salt Creek and Del Valle Faults, site development is to remain outside of Building Setback Zones around fault traces, and the possible fault zone connecting them (see Figure 4.1-4). (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 42.) <i>(This mitigation measure is not applicable to the Landmark Village project. The measure refers to certain faults, which are not located within the boundaries of the Landmark Village project site, including the off-site grading areas.)</i></p>	Not applicable.		

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<p>SP 4.1-55 To minimize potential hazards from shattered ridge effects, structures and storage tanks proposed on ridgelines are to have a minimum 20-foot setback from the margins of the bedrock. Designation of specific building setbacks will require evaluation at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 40.) Building setback zones are to be identified on all site plans and tract maps for the site. <i>(This mitigation measure is not applicable to the Landmark Village project. The measure refers to storage tanks on ridgelines within areas of Newhall Ranch, which are not applicable to the Landmark Village project site, including the off-site areas.)</i></p>			
<p>SP 4.1-56 The potential for ground motion and ground failure associated with a seismic event in proximity to the planned roadway alignments of Magic Mountain Parkway and Valencia Boulevard will be evaluated at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, p. 11.) Mitigation to reduce associated significant impacts will also be identified at that time. <i>(This mitigation measure is not applicable to the Landmark Village project. The measure refers to planned roadway alignments within Newhall Ranch, which are not applicable to the Landmark Village project site, including the off-site grading areas.)</i></p>	<p>Not applicable.</p>		
<p>LV 4.1-1. Prior to placing compacted fill, the ground surface shall be prepared by removing non-compacted artificial fill (af), disturbed compacted fill soils (Caf), loose alluvium, and other unsuitable materials. The geotechnical engineer and/or his representatives shall observe the excavated areas prior to placing compacted fill.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety</p>
			<p>2. LACDPW, Geology/Soils Section, Building and Safety</p>
			<p>3. During Grading</p>
<p>LV 4.1-2. After the ground surface to receive fill has been exposed, it shall be ripped to a minimum depth of 6 inches, brought to optimum moisture content or above and thoroughly mixed to obtain a near uniform moisture condition and uniform blend of materials, and then compacted to 90 percent per the latest American Society for Testing and Materials (ASTM) D1557 laboratory maximum density.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety</p>
			<p>2. LACDPW, Geology/Soils Section, Building and Safety</p>
			<p>3. During Grading</p>
<p>LV 4.1-3 Removal depths for alluvium, older alluvium, and overlying soil/plow pan materials range from 4 to 16 feet and shall be as indicated on the approved Geologic/Geotechnical Map</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety</p>
			<p>2. LACDPW, Geology/Soils Section, Building and Safety</p>
			<p>3. During Grading</p>

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LV 4.1-4. Soil removals on the southwestern portion of the site shall be scheduled if possible during the summer or fall months, to minimize impacts to Grading from shallow groundwater. The contractor shall be prepared to implement dewatering systems, if necessary.	Applicant (Geotechnical Engineer)	Grading Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading
LV 4.1-5. Pico and Saugus Formation bedrock shall be over-excavated 5 feet below proposed grade to eliminate cut-fill or bedrock-alluvium transitions in building pads. Expansive materials in the bedrock shall be over excavated 8 feet in building pad areas.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading
LV 4.1-6. Slopewash that is locally present on the site adjacent to slope areas on the northern margin of the site shall be removed and recompacted prior to the placement of compacted fill.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading
LV 4.1-7. Compacted artificial fill along the northern margin of the site shall be assessed for building suitability at the grading plan stage.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. Prior to Issuance of Grading Permit
LV 4.1-8. Concrete, asphalt concrete and other debris stockpiled on the site shall be removed, and either ground up for use as sub-base material, or reduced into fragments small enough to be buried in the deeper portions of the fill.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading

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<p>LV 4.1-9. Where recommended removals encounter ground water, water levels shall be controlled by providing an adequate excavation bottom/slope and sumps for pumping water out as the excavation proceeds, or ground water may be lowered by installing shallow dewatering well points prior to grading. Partial removals of soils above the water table and soil improvement below the water table may be another option. Dewatering may be needed depending on the season when the removals are performed and the actual removal depths are determined. Contractors shall use piezometric data for planning dewatering measures.</p>	<p>Applicant (Geotechnical Engineer and Civil Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-10. On-site soils, except any debris or organic matter, may be used as sources for compacted fills. Rock or similar irreducible material with a maximum dimension greater than 8 inches shall not be placed in the fill without approval of the geotechnical engineer. Rocks or hard fragments larger than 4 inches shall not compose more than 25 percent of the fill and/or lift. Any large rock fragments over 8 inches in size may be incorporated into the fill as rockfill in windrows after being reduced to the specific maximum rock fill size. Where fill depths are too shallow to allow large rock disposal, special handling or removal may be required. Much of the on-site alluvium and older alluvium is coarse-grained and lacks sufficient cohesion for surficial stability in fill slopes. Selective grading of fill materials with sufficient cohesion derived from on site or imported fill shall be necessary for use in fill slopes.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-11. The engineering characteristics of imported fill material shall be evaluated when the source area has been identified.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-12. Most of the slopes proposed on the site are fill slopes. Stability fills are recommended for all of the cut-slopes on the site; therefore, no cut-slopes will remain after the completion of grading. All fill slopes shall be constructed on firm material where the slope receiving fill exceeds a ratio of 5 to 1 horizontal to vertical (h:v). Fill slope inclination shall not be steeper than 2:1 (h:v). The fill material within approximately one equipment width (typically 15 feet) of the slope face shall be constructed with cohesive material selectively graded from on-site or import fills. Stability fills are recommended where cut-slope faces will expose fill-over-bedrock or alluvium-over-bedrock conditions.</p> <p>These fills shall be constructed with a keyway at the toe of the fill slope with a minimum equipment width but not less than 15 feet, and a minimum depth of 3 feet into the firm undisturbed earth. Following completion of the keyway excavations, backfilling with certified engineered fill shall not proceed prior to the approval of the keyway by the project engineering</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>

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<p>LV 4.1-13. Backcut slopes for Stability fills shall be no steeper than the final face of the proposed fill.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-14. Areas that are to receive compacted fill shall be observed by the geotechnical engineer prior to the placement of fill.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-15 All drainage devices shall be properly installed and observed by the <u>project's licensed geotechnical engineer and/or owner's representative(s)</u> prior to placement of backfill.</p>	<p>Applicant (Geotechnical Engineer and Construction Superintendent)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-16. Fill soils shall consist of imported soils or on-site soils free of organics, cobbles, and deleterious material, provided each material is approved by the geotechnical engineer. The geotechnical engineer shall evaluate and/or test the import material for its conformance with the report recommendations prior to its delivery to the site. The contractor shall notify the geotechnical engineer 72 hours prior to importing material to the site.</p>	<p>Applicant (Geotechnical Engineer and Construction Superintendent)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-17. Fill shall be placed in controlled layers (lifts), the thickness of which is compatible with the type of compaction equipment used. The fill materials shall be brought to optimum moisture content or above, thoroughly mixed during spreading to obtain a near uniform moisture condition and uniform blend of materials, and then placed in layers with a thickness (loose) not exceeding 8 inches. Each layer shall be compacted to a minimum compaction of 90 percent relative to the maximum dry density determined per the latest ASTM D1557 test. Density testing shall be performed by the geotechnical engineer to verify relative compaction. The contractor shall provide proper access and level areas for testing.</p>	<p>Applicant (Geotechnical Engineer and Construction Superintendent)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>

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<p>LV 4.1-18. Rocks or rock fragments less than 8 inches in the largest dimension may be utilized in the fill, provided they are not placed in concentrated pockets. However, rocks larger than 4 inches shall not be placed within 3 feet of finish grade.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-19 Rocks greater than 8 inches in largest dimension shall be taken off site, or placed in accordance with the recommendation of the soils engineer in <u>on-site</u> areas designated as suitable for rock disposal <u>or placement</u>.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-20. Where space limitations do not allow for conventional fill compaction operations, special backfill materials, and procedures may be required. Pea gravel or other select fill can be used in areas of limited space. A sand and Portland cement slurry (two sacks per cubic-yard mix) shall be used in limited space areas for shallow backfill near final pad grade, and pea gravel shall be placed in deeper backfill near drainage systems.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-21. The geotechnical engineer shall observe the placement of fill and conduct in-place field density tests on the compacted fill to check for adequate moisture content and the required relative compaction. Where less than specified relative compaction is indicated, additional compacting effort shall be applied and the soil moisture conditioned as necessary until adequate relative compaction is attained.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-22. The Contractor shall comply with the minimum relative compaction out to the finish slope face of fill slopes, buttresses, and stabilization fills as set forth in the specifications for compacted fill. This may be achieved by either overbuilding the slope and cutting back as necessary, or by direct compaction of the slope face with suitable equipment, or by any other procedure that produces the required result.</p>	<p>Applicant (Construction Superintendent)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>

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<p>LV 4.1-23 Any abandoned underground structures, such as cesspools, cisterns, mining shafts, tunnels, septic tanks, wells, pipelines or other structures not discovered prior to grading shall be removed or treated to the satisfaction of the <u>project's licensed soils engineer and/or the controlling agency for the project, and the engineer shall follow all applicable regulatory standards, including those established by the California Department of Oil and Gas.</u></p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-24. The Contractor shall have suitable and sufficient equipment during a particular operation to handle the volume of fill being placed. When necessary, fill placement equipment shall be shut down temporarily in order to permit proper compaction of fills, correction of deficient areas, or to facilitate required field testing.</p>	<p>Applicant (Construction Superintendent)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-25. The Contractor shall be responsible for the satisfactory completion of all earthwork in accordance with the project plans and specifications.</p>	<p>Applicant (Construction Superintendent)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-26. Trench excavations to receive backfill shall be free of trash, debris or other unsatisfactory materials prior to backfill placement, and shall be observed by the geotechnical engineer.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-27. Except as stipulated herein, soils obtained from the trench excavation may be used as backfill if they are essentially free of organics and deleterious materials.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>

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<p>LV 4.1-28. Rocks generated from the trench excavation not exceeding 3 inches in largest dimension may be used as backfill material. However, such material shall not be placed within 12 inches of the top of the pipeline. No more than 30 percent of the backfill volume shall contain particles larger than 1 inch in diameter, and rocks shall be well mixed with finer soil.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-29 Soils (other than aggregates) with a Sand Equivalent (SE) greater than or equal to 30, as determined by ASTM D 2419 Standard Test Method or at the discretion of the <u>project's licensed geotechnical engineer or representative in the with field experience</u>, may be used for bedding and shading material in the pipe zone areas. These soils are considered satisfactory for compaction by jetting procedures.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-30. No jetting shall occur in utility trenches within the top 2 feet of the subgrade of concrete slabs-on-grade.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-31. Trench backfill other than bedding and shading shall be compacted by mechanical methods such as tamping sheepsfoot, vibrating or pneumatic rollers, or other mechanical tampers to achieve the density specified herein. The backfill materials shall be brought to optimum moisture content or above, thoroughly mixed during spreading to obtain a near uniform moisture condition and uniform blend of materials, and then placed in horizontal layers with a thickness (loose) not exceeding 8 inches. Trench backfills shall be compacted to a minimum compaction of 90 percent relative to the maximum dry density determined per the latest ASTM D1557 test.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-32. The contractor shall select the equipment and process to be used to achieve the specified density within a trench without damage to the pipeline, the adjacent ground, existing improvements, or completed work.</p>	<p>Applicant (Construction Superintendent)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>

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<p>LV 4.1-33 Observations and field tests shall be carried on during construction by the <u>project's licensed</u> geotechnical engineer to confirm that the required degree of compaction within a trench has been obtained. Where compaction within a trench is less than that specified, additional compaction effort shall be made with adjustment of the moisture content as necessary until the specified compaction is obtained. Field density tests may be omitted at the discretion of the engineer or his representative in the <u>with</u> field <u>experience</u>.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-34. Whenever, in the opinion of the geotechnical engineer, an unstable condition is being created within a trench, either by cutting or filling, the work shall not proceed until an investigation has been made and the excavation plan revised, if deemed necessary.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-35. Fill material within a trench shall not be placed, spread, or rolled during unfavorable weather conditions. When the work is interrupted by heavy rain, fill operations shall not be resumed until field tests by the geotechnical engineer indicate the moisture content and density of the fill are as specified.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-36. Water shall never be allowed to stand or pond on building pads, nor should it be allowed to run over constructed slopes, but is to be conducted to the driveways or natural waterways via non-erodible drainage devices. In addition, it is recommended that all drainage devices be inspected periodically and be kept clear of all debris. Drainage and erosion control shall be in accordance with the standards set forth in Sections 7018 and 7019 of the 1997 Los Angeles County Uniform Building Code.</p>	<p>Applicant (Civil Engineer and Construction Superintendent)</p>	<p>Include this Measure in Specifications Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-37. Modification of the existing pad grades after approval of Fine Grading by the project supervising civil engineer can adversely affect the drainage of the lots. Lot drainage shall not be modified by future landscaping, construction of pools, spas, walkways, garden walls, etc., unless additional remedial measures (area drains, additional grading, etc.) are in compliance with Los Angeles County Codes.</p>	<p>Applicant (Civil Engineer and Construction Superintendent)</p>	<p>Include this Measure in Specifications Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. After Approval of Fine Grading Plan</p>

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<p>LV 4.1-38. Positive surface drainage shall be maintained away from buildings. The recommended drainage patterns shall be established at the time of Fine Grading. Roof drainage shall be collected in gutters and downspouts, which terminate at approved discharge points.</p>	<p>Applicant (Civil Engineer and Construction Superintendent)</p>	<p>Include this Measure in Specifications Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-39. Permanent erosion control measures shall be initiated immediately following completion of grading.</p>	<p>Applicant (Civil Engineer and Construction Superintendent)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Immediately Following Completion of Grading</p>
<p>LV 4.1-40 All interceptor ditches, drainage terraces, down-drains and any other drainage devices shall be maintained and kept clear of debris. A qualified <u>The project's licensed civil</u> engineer shall review any proposed additions or revisions to these systems, to evaluate their impact on slope erosion.</p>	<p>Applicant (Civil Engineer and Construction Superintendent)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Immediately Following Completion of Grading</p>
<p>LV 4.1-41. Retaining walls shall have adequate freeboard to provide a catchment area for minor slope erosion. Periodic inspection, and if necessary, cleanout of deposited soil and debris shall be performed, particularly during and after periods of rainfall.</p>	<p>Applicant (Civil Engineer and Construction Superintendent)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Immediately Following Completion of Grading</p>
<p>LV 4.1-42. The future developers shall be made aware of the potential problems, which may develop when drainage is altered through landscaping and/or construction of retaining walls, and paved walkways. Pondered water, water directed over slope faces, leaking irrigation systems, over-watering or other conditions that could lead to excessive soil moisture, shall be avoided.</p>	<p>Applicant (Civil Engineer and Construction Superintendent)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Immediately Following Completion of Grading</p>

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<p>LV 4.1-43. Slope surficial soils may be subject to water-induced mass erosion. Therefore, a suitable proportion of slope planting shall have root systems, which will develop well below 3 feet. Drought-resistant shrubs and low trees for this purpose shall be considered. Intervening areas can then be planted with lightweight surface plants with shallower root systems. All plants shall be lightweight and require low moisture. Any loose slough generated during the process of planting shall be properly removed from the slope face(s).</p>	<p>Applicant (Landscape Architect)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Occupancy Permits</p>
<p>LV 4.1-44. Short-term, non-plant erosion control measures shall be implemented during construction delays, adverse climate/weather conditions, and when plant growth rates do not permit rapid vegetation of graded areas. Examples of short-term, non-plant erosion control measures include matting, netting, plastic sheets, deep (5 feet) staking, etc.</p>	<p>Applicant (Civil Engineer and Construction Superintendent)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Delays in All Construction Phases</p>
<p>LV 4.1-45. All possible precautions shall be taken to maintain a moderate and uniform soil moisture to avoid high and/or fluctuating water content in slope materials. Slope irrigation systems shall be properly operated and maintained and system controls shall be placed under strict control.</p>	<p>Applicant (Landscape Architect)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Occupancy Permits</p>
<p>LV 4.1-46. A program of aggressive rodent control shall be implemented to control burrowing on slope areas.</p>	<p>Applicant (Civil Engineer and Construction Superintendent)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During All Construction Phases</p>
<p>LV 4.1-47. Bank protection is proposed to consist of a soil cement, gunite or rip-rap liner, which is buried/concealed behind a 4:1 (h:v) fill slope. Construction of the liner will involve the excavation of a 20-foot-deep slot as shown in the details on the tentative map. Where the toe of the 4:1 slope extends beyond the removals for the slot, the alluvium shall be overexcavated 3 feet prior to placement of overlying fill.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Slope Protection Activities</p>

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<p>LV 4.1-48. Ground water will likely be encountered between a depth of 5 and 10 feet; therefore dewatering shall be undertaken to complete the lower 10 to 15 feet of the proposed slot excavation.</p>	<p>Applicant (Civil Engineer and Construction Superintendent)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Slope Protection Activities</p>
<p>LV 4.1-49. All final grades shall be sloped away from the building foundations to allow rapid removal of surface water runoff. No ponding of water shall be allowed adjacent to the foundations. Plants and other landscape vegetation requiring excessive watering shall be avoided adjacent to the building foundations. Should landscaping be constructed, an effective watertight barrier shall be provided to prevent water from affecting the building foundations.</p>	<p>Applicant (Civil Engineer, Construction Superintendent and Landscape Architect)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Fine Grading and Landscape Installation</p>
<p>LV 4.1-50. Future structures shall be designed according to standards applicable to Seismic Zone 4 of the Uniform Building Code.</p>	<p>Applicant</p>	<p>Building Plan Check</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Building Permits</p>
<p>LV 4.1-51. Lots underlain by transitions between different material types (e.g., bedrock to fill, bedrock to alluvium, etc.) shall be over-excavated 5 feet to minimize potential adverse impacts associated with differential materials response.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-52. Over-excavation of clay-rich bedding planes of the Saugus Formation or Pico Formation and subsequent placement of a certified fill cap is recommended to mitigate potential hazards from expansive material, and to reduce potential hazards from potential secondary seismogenic movement along bedding planes.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>

8.0 Mitigation Monitoring Plan

<p>LV 4.1-53. Stability Fills shall be analyzed at the grading plan stage based on testing of the actual materials proposed for the fill.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Grading Plan Check</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Grading Permit</p>
<p>LV 4.1-54. Most of the alluvium and older Alluvium on the site are coarse-grained and have low cohesion. These materials shall not be used within the outer 4 feet of fill slopes and Stability Fills.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-55. Excavations deeper than 3 feet shall conform to safety requirements for excavations as set forth in the State Construction Safety Orders enforced by the State Division of Industrial Safety, California occupational Safety and Health Administration (CAL OSHA). Temporary excavations no higher than 12 feet shall be no steeper than 1:1 (h:v). For excavations to 20 feet in height, the bottom 3.5 feet may be vertical and the upper portion between 3.5 and 20 feet shall be no steeper than 1.5:1 (h:v). Excavations not complying with these requirements shall be shored. It is strongly recommended that excavation walls in sands and dry soils be kept moist, but not saturated at all times.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-56. Parameters for design of cantilever and braced shoring shall be provided at the grading plan stage.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Grading Plan Check or Field Verification as Applicable</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Grading Permit or During Grading Activities</p>
<p>LV 4.1-57. The bases of excavations or trenches shall be firm and unyielding prior to foundations or utility construction. On-site materials other than topsoil or soils with roots or deleterious materials may be used for backfilling excavations. Densification (compaction) by jetting may be used for on-site clean sands or imported equivalent of coarser sand provided they have a Sand Equivalent greater than or equal to 30 as determined by ASTM D2419 test method. Recommended specifications for placement of trench backfill are presented in Appendix C of the September 27, 2000 geologic and geotechnical report.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>

8.0 Mitigation Monitoring Plan

<p>LV 4.1-58. The structural design shall include seismic geotechnical parameters in accordance with Uniform Building Code (UBC) requirements for Seismic Zone 4. These parameters shall be provided at the grading plan stage.</p>	<p>Applicant</p>	<p>Building Plan Check</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Grading Permit</p>
<p>LV 4.1-59. Shallow spread footings for foundation support of up to three-story residential, commercial or light industrial developments can adequately be derived from non-organic native soils, processed as necessary, and bedrock or engineered fill compacted as previously recommended. The composition of footings for heavier structures, if applicable, shall be addressed at the grading plan stage. Tentatively, an allowable bearing capacity of 2,500 pounds per square foot can be used for shallow foundations constructed in certified compacted fill originated from existing, near-surface soils (except vegetative soils). Lateral resistance of footing walls shall be provided at the grading plan stage.</p>	<p>Applicant</p>	<p>Grading Plan Check and Building Plan Check, as Applicable</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Grading and or Building Permits</p>
<p>LV 4.1-60. Figure C4 (Appendix C), "Cut Lot (Transitional)" and "Cut-Fill Lot (Transitional)" of the September 27, 2000 geologic and geotechnical report provides a foundation grading detail for locations where foundations will straddle transition zones between cut and fill materials. If the remaining cut-fill transition is steep at depth below the building area, the geometry of the transition shall be reviewed during grading operations by the soils engineer on a site-specific basis to evaluate the need for additional over-excavation removals and/or additional foundation reinforcement. Based on this review, appropriate action shall be taken as deemed necessary by the engineer. As a general guideline, steep cut/fill transitions would include slope gradients steeper than 4:1 (h:v) and overall variations in fill thickness of greater than 15 feet, which occur within 20 feet of final pad grade. Transitions between differing material types, such as bedrock and alluvium, also shall be overexcavated 5 feet as recommended in Section 1.2 of Appendix E of the September 27, 2000, Geologic and Geotechnical Report.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading</p>
<p>LV 4.1-61. To minimize significant settlements, upper soils in areas to receive fills shall be removed and recompacted to competent materials. Specific foundation design loads shall be provided at the grading plan stage.</p>	<p>Applicant (Geotechnical Engineer)</p>	<p>Grading Plan Check Field Verification</p>	<p>1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Grading Permit and During Grading</p>

8.0 Mitigation Monitoring Plan

LV 4.1-62. Whenever seepage of groundwater is observed, the condition shall be evaluated by the engineering geologist and geotechnical engineer prior to covering with fill material.

Applicant (Engineering Geologist and Geotechnical Engineer)

Field Verification

1. LACDPW, Geology/Soils Section, Building and Safety

		8.0 Mitigation/ Monitoring Plan	
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading
LV 4.1-63. Surface drainage control design shall include provisions for positive surface gradients to ensure that surface runoff is not permitted to pond, particularly above slopes or adjacent to building foundations or slabs. Surface runoff shall be directed away from slopes and foundations and collected in lined ditches or drainage swales, via non-erodible drainage devices, which is to discharge to paved roadways, or existing watercourses. If these facilities discharge onto natural ground, means shall be provided to control erosion and to create sheet flow.	Applicant (Civil Engineer and Construction Superintendent)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. Prior to Issuance of Occupancy Permit
LV 4.1-64. Fill slopes and stability fills, as applicable, shall be provided with subsurface drainage as necessary for stability.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading

8.0 Mitigation Monitoring Plan

LV 4.1-65. Additional testing for expansive soils shall be performed at the grading plan stage and during finish grading so that appropriate foundation design recommendations for expansive soils, if applicable, can be made.	Applicant (Geotechnical Engineer)	Grading Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
		Field Verification	3. Prior to Issuance of Grading Permit and During Grading
LV 4.1-66. Testing for soil corrosivity shall be undertaken at additional locations within the project site at the grading plan stage. Final recommendations for concrete shall be in accordance with the latest UBC requirements, and a corrosion specialist shall provide mitigating recommendations for potential corrosion of metals.	Applicant (Geotechnical Engineer)	Receipt of Test Results	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. Prior to Issuance of Grading Permit
LV 4.1-67. Preliminary retaining wall geotechnical design parameters and pavement design(s) shall be provided at the grading plan stage.	Applicant (Geotechnical Engineer)	Grading Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. Prior to Issuance of Grading Permit
LV 4.1-68. If the proposed fills over alluvium and slopewash at either the Adobe Canyon or Chiquito Canyon sites are to be considered "structural fill," subsurface studies shall be performed to determine actual liquefaction potential of these soils. If this potential exists, it shall be addressed by removal and recompaction of the alluvium above groundwater, in order to provide a cap to bridge effects.	Applicant (Geotechnical Engineer)	Grading Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. Prior to Issuance of Grading Permit
LV 4.1-69. Where possible, removals that impact the mapped landslides shall be completed so as to not remove the existing landslide stability. If this is not possible, the conditions shall be geotechnically evaluated on a case-by-case basis at the Grading Plan stage in order to safely complete the necessary removals.	Applicant (Geotechnical Engineer)	Grading Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety

		8.0 Mitigation Monitoring Plan	
			3. Prior to Issuance of Grading Permit
LV 4.1-70. Slope stability analysis shall be performed for the 186-foot-high cut slope along the base of the existing Edison tower within the Chiquito Canyon grading site. Corrective measures, such as construction of a buttress or stability fills, shall be implemented if the proposed cut slope does not comply with the required minimum factor of safety.	Applicant (Geotechnical Engineer)	Grading Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. Prior to Issuance of Grading Permit
LV 4.1-71. If future development is proposed within either Adobe Canyon or Chiquito Canyon, subsurface exploration and analyses shall be conducted to determine landslide stability. Means to mitigate the potential effects of landslides, including complete or partial removal, buttressing, avoidance, or building setbacks shall be identified at that time.	Applicant (Geotechnical Engineer)	Grading Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. Prior to Issuance of Grading Permit
LV 4.1-72. If future development is proposed within Chiquito Canyon, slope stability analysis shall be performed for the 186-foot-high cut slope along the base of the existing Edison tower within the Chiquito Canyon grading site. Corrective measures, such as construction of a buttress or stability fills, shall be implemented if the proposed cut slope does not comply with the required minimum factor of safety.	Applicant (Geotechnical Engineer)	Grading Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. Prior to Issuance of Grading Permit
LV 4.1-73 If the proposed fills over alluvium and slopewash at either Adobe Canyon or Chiquito Canyon are to be considered "structural fill," subsurface studies shall be performed to determine actual liquefaction potential of these soils. If this potential exists, it shall be addressed by removal and recompaction of the alluvium above groundwater, in order to provide a cap to bridge effects.	Applicant (Geotechnical Engineer)	Grading Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. Prior to Issuance of Grading Permit
LV 4.1-74 If future development is proposed within either Adobe Canyon or Chiquito Canyon, subsurface exploration and analyses shall be conducted to determine landslide stability. Means to mitigate the potential effects of landslides, including complete or partial removal, buttressing, avoidance, or building setbacks shall be identified at that time.	Applicant (Geotechnical Engineer)	Grading Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety

		8.0 Mitigation/Monitoring Plan	
			3. Prior to Issuance of Grading Permit
LV 4.1-75 If future development is proposed within Chiquito Canyon, slope stability analysis shall be performed for the 186-foot-high cut slope along the base of the existing Edison tower within the Chiquito Canyon grading site. Corrective measures, such as construction of a buttress or stability fills, shall be implemented if the proposed cut slope does not comply with the required minimum factor of safety.	Applicant (Geotechnical Engineer)	Grading Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. Prior to Issuance of Grading Permit
4.2 HYDROLOGY			
SP 4.2-1 All on- and off-site flood control improvements necessary to serve the Newhall Ranch Specific Plan are to be constructed to the satisfaction of the LACDPW, Flood Control Division.	Applicant (Civil Engineer)	Approval of Drainage Plans Field Verification	1. LACDPW, Flood Control District (FCD) 2. LACDPW, FCD 3. Prior to Issuance of Occupancy Permit(s)
SP 4.2-2 All necessary permits or letters of exemption from the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game, and the RWQCB for Specific Plan-related development are to be obtained prior to construction of drainage improvements. The performance criteria to be used in conjunction with 1603 agreements and/or 404 permits are described in Section 4.6, Biological Resources, Mitigation Measures 4.6-1 through 4.6-10 (restoration) and 4.6-11 through 4.6-16 (enhancement) (of the Newhall Ranch Specific Plan Program EIR).	Applicant (Civil Engineer)	Approval of Drainage Plans Field Verification	1. LACDPW, Flood Control District (FCD)

8.0 Mitigation Monitoring Plan

			2. LACDPW, FCD
			3. Prior to Issuance of Grading Permit(s)
SP 4.2-3 All necessary streambed agreement(s) are to be obtained from the California Department of Fish and Game wherever grading activities alter the flow of streams under CDFG jurisdiction. The performance criteria to be used in conjunction with 1603 agreements and/or 404 permits are described in Section 4.6, Biological Resources, Mitigation Measures 4.6-1 through 4.6-10 (restoration) and 4.6-11 through 4.6-16 (enhancement) (of the Newhall Ranch Specific Plan Program EIR).	Applicant (Civil Engineer)	Approval of Drainage Plans Field Verification	1. LACDPW, Flood Control District (FCD)
			2. LACDPW, FCD
			3. Prior to Issuance of Grading Permit(s)
SP 4.2-4 Conditional Letters of Map Revision (CLOMR) relative to adjustments to the 100-year FIA floodplain are to be obtained by the applicant after the proposed drainage facilities are constructed.	Applicant (Civil Engineer)	Construction of Drainage Facilities Field Verification	1. LACDPW, Flood Control District (FCD)
			2. LACDPW, FCD
			3. Prior to Issuance of Occupancy Permit(s)
SP 4.2-5 Prior to the approval and recordation of each subdivision map, a Hydrology Plan, Drainage Plan, and Grading Plan (including an Erosion Control Plan if required) for each subdivision must be prepared by the applicant of the subdivision map to ensure that no significant erosion, sedimentation, or flooding impacts would occur during or after site development. These plans shall be prepared to the satisfaction of the LACDPW.	Applicant (Civil Engineer)	Subdivision Approval	1. LACDPW, Flood Control District (FCD)
			2. LACDPW, FCD
			3. Prior to Recordation of Subdivision Map(s)
SP 4.2-6 Install permanent erosion control measures, such as desilting and debris basins, drainage swales, slope drains, storm drain inlet/outlet protection, and sediment traps in order to prevent sediment and debris from the upper reaches of the drainage areas which occur on the Newhall Ranch site from entering storm drainage improvements. These erosion control measures shall be installed to the satisfaction of the LACDPW.	Applicant (Civil Engineer)	Approval of Drainage Plans Field Verification	1. LACDPW, Flood Control District (FCD)
			2. LACDPW, FCD
			3. Prior to Issuance of Occupancy Permit(s)

8.0 Mitigation Monitoring Plan

<p>SP 4.2-7 The applicant for any subdivision map permitting construction shall satisfy all applicable requirements of the NPDES Program in effect in Los Angeles County to the satisfaction of the LACDPW. These requirements currently include preparation of an Urban Storm Water Mitigation Plan (USWMP) containing design features and Best Management Practices (BMPs) appropriate and applicable to the subdivision. In addition, the requirements currently include preparation of a Storm Water Management Pollution Prevention Plan (SWPPP) containing design features and BMPs appropriate and applicable to the subdivision. The LACDPW shall monitor compliance with those NPDES requirements.</p>	<p>Applicant (Civil Engineer)</p>	<p>Approval of Drainage Plans Field Verification</p>	<p>1. LACDPW, Flood Control District (FCD)</p>
			<p>2. LACDPW, FCD</p>
			<p>3. Prior to Issuance of Grading, Building, or Occupancy Permit(s), as appropriate</p>
<p>LV 4.2-1. The on-site storm drains (pipes and reinforced concrete boxes) and open channels shall be designed and constructed for either the 25-year or 50-year capital storm.</p>	<p>Applicant (Civil Engineer)</p>	<p>Approval of Drainage Plans Field Verification</p>	<p>1. LACDPW, Flood Control District (FCD) 2. LACDPW, FCD 3. Prior to Issuance of Occupancy Permit(s)</p>
<p>LV 4.2-2. Debris basins shall be constructed pursuant to LACDPW requirements to intercept flows from undeveloped areas entering into the developed portions of the site.</p>	<p>Applicant (Civil Engineer)</p>	<p>Approval of Drainage Plans Field</p>	<p>1. LACDPW, FCD 2. LACDPW, FCD 3. Prior to Issuance of Occupancy Permit(s)</p>
<p>LV 4.2-3. Energy dissipaters consisting of either rip-rap or larger standard impact-type energy dissipaters shall be installed as required by LACDPW at outlet locations to reduce velocities of runoff into the channel where necessary to prevent erosion.</p>	<p>Applicant (Civil Engineer)</p>	<p>Approval of Drainage Plans Field</p>	<p>1. LACDPW, FCD 2. LACDPW, FCD 3. Prior to Issuance of Occupancy Permit(s)</p>

8.0 Mitigation Monitoring Plan			
<p>LV 4.2-4. The project is required to comply with the Regional Water Quality Control Board (RWQCB) Municipal Permit (General MS4 Permit) Order No.R4-2006-0074, National Pollutant Discharge Elimination System (NPDES) No. CAS004001 (amended September 14, 2006), and with the state's General Construction Activity Storm Water Permit, California State Water Resources Control Board Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) No. CAS000002, reissued on August 19, 1999, as amended and further modified by Resolution No. 2001-046 on April 26, 2001. <i>(Since release of the Draft EIR, this permit has been reissued. This mitigation has been revised to reflect the most current permit dates).</i></p>	Applicant (Construction Superintendent)	Submittal of Urban Storm Water management Plan (USWMP) and Storm Water Pollution Prevention Plan (SWPPP) to	<ol style="list-style-type: none"> 1. RWQCBLAR 2. LACDPW, Building and Safety 3. Prior to Grading and During Grading Operations
<p>LV 4.2-5. During all construction phases, temporary erosion control shall be implemented to retain soil and sediment on the tract map site, within the Adobe Canyon borrow site, the Chiquito Canyon grading site, the utility corridor right-of-way, and the bank stabilization areas, as follows:</p>	Applicant (Construction Superintendent)	Field Verification	1. LACDPW, FCD
<ul style="list-style-type: none"> • Re-vegetate exposed areas as quickly as possible; • Minimize disturbed areas; • Divert runoff from downstream drainages with earth dikes, temporary drains, slope drains, etc.; • Reduce velocity through outlet protection, check dams, and slope roughening/terracing; • Implement dust control measures, such as sand fences, watering, etc.; • Stabilize all disturbed areas with blankets, reinforced channel liners, soil cement, fiber matrices, geotextiles, and/or other erosion resistant soil coverings or treatments; 			2. LACDPW, FCD
<ul style="list-style-type: none"> • Stabilize construction entrances/exits with aggregate underdrain with filter cloth or other comparable method; • Place sediment control BMPs at appropriate locations along the site perimeter and at all operational internal inlets to the storm drain system at all times during the rainy season (sediment control BMPs may include filtration devices and barriers, such as fiber rolls, silt fence, straw bale barriers, and gravel inlet filters, and/or with settling devices, such as sediment traps or basins); and/or • Eliminate or reduce, to the extent feasible, non-stormwater discharges (e.g., pipe flushing, and fire hydrant flushing, over-watering during dust control, vehicle and equipment wash down) from the construction site through the use of appropriate sediment control BMPs. 			3. During All Construction Phases
<p>LV 4.2-6. All necessary permits, agreements, letters of exemption from the Army Corps of Engineers (ACOE) and/or the California Department of Fish and Game (CDFG) for project-related development within their respective jurisdictions must be obtained prior to the issuance of grading permits.</p>	Applicant	Receipt of Necessary Documents	<ol style="list-style-type: none"> 1. Los Angeles County Department of Regional Planning (LACDRP) 2. LACDRP 3. Prior to Issuance of Grading Permits

8.0 Mitigation Monitoring Plan

<p>LV 4.2-7. By October 1st of each year, a separate erosion control plan for construction activities shall be submitted to the local municipality describing the erosion control measures that will be implemented during the rainy season (October 1 through April 15).</p>	<p>Applicant (Construction Superintendent)</p>	<p>Receipt and Review of Annual Erosion Control Plan</p>	<p>1. LACDPW, FCD 2. LACDPW, FCD 3. By October 1 of Each Year During Construction Activities</p>
<p>LV 4.2-8. A final developed condition hydrology analysis shall be prepared in conjunction with final project design when precise engineering occurs. This final analysis shall confirm that the final project design is consistent with this analysis. This final developed condition hydrology analysis shall confirm that the sizing and design of the water quality and hydrologic control. BMPs control hydromodification impacts in accordance with the NSRP Sub-Regional Stormwater Mitigation Plan. Those final calculations shall establish design features for the project that satisfy the criterion that post-development peak stormwater runoff discharge rates, velocities, and duration in natural drainage systems mimic pre-development conditions. All elements of the storm drain system shall conform to the policies and standards of the LACDPW, Flood Control Division, as applicable.</p>	<p>Applicant (Project Hydrologist)</p>	<p>Receipt and Review of Final Hydrology Analysis</p>	<p>1. LACDPW, FCD 2. LACDPW, FCD 3. Prior to Approval of Final Design Plans</p>
<p>LV 4.2-9. Ultimate project hydrology and debris production calculations shall be prepared by a project engineer to verify the requirements for debris basins and/or desilting inlets.</p>	<p>Applicant (Civil Engineer)</p>	<p>Review of Calculations</p>	<p>1. LACDPW, FCD 2. LACDPW, FCD 3. Prior to Approval of Final Design Plans</p>
<p>LV 4.2-10. To reduce debris being discharged from the site, debris basins shall be designed and constructed pursuant to LACDPW Flood Control to intercept flows from undeveloped areas entering into the developed portions of the site.</p>	<p>Applicant (Civil Engineer)</p>	<p>Approval of Drainage Plans Field</p>	<p>1. LACDPW, FCD 2. LACDPW, FCD 3. Prior to Issuance of Occupancy Permit(s)</p>
<p>4.3 WATER QUALITY</p>			
<p>SP 4.2-1. All on- and off-site flood control improvements necessary to serve the Newhall Ranch Specific Plan are to be constructed to the satisfaction of the County of Los Angeles Department of Public Works Flood Control Division.</p>	<p>Applicant (Civil Engineer)</p>	<p>Approval of Drainage Plans Field</p>	<p>1. LACDPW, FCD 2. LACDPW, FCD 3. Prior to Issuance of Occupancy Permit(s)</p>
<p>SP 4.2-2. All necessary permits or letters of exemption from the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game, and the Regional Water Quality Control Board for Specific Plan-related development are to be obtained prior to construction of drainage improvements. The performance criteria to be used in conjunction with 1603 agreements and/or 404 permits are described in Section 4.6, Biological Resources, Mitigation Measures 4.6-1 through 4.6-10 (restoration) and 4.6-11 through 4.6-16 (enhancement).</p>	<p>Applicant</p>	<p>Receipt of all Necessary Permit(s)</p>	<p>1. ACOE, US Fish and Wildlife Service (USFWS), CDFG, RWQCBLAR 2. ACOE, USFWS, CDFG, RWQCBLAR 3. Prior to Grading</p>

8.0 Mitigation Monitoring Plan

<p>SP 4.2-3. All necessary streambed agreement(s) are to be obtained from the California Department of Fish and Game wherever grading activities alter the flow of streams under CDFG jurisdiction. The performance criteria to be used in conjunction with 1603 agreements and/or 404 permits are described in Section 4.6, Biological Resources, Mitigation Measures 4.6-1 through 4.6-10 (restoration) and 4.6-11 through 4.6-16 (enhancement).</p>	<p>Applicant</p>	<p>Receipt of Streambed Agreements</p>	<ol style="list-style-type: none"> 1. CDFG 2. LACDPW, FCD 3. Prior to Grading
<p>SP 4.2-4. Conditional Letters of Map Revision (CLOMR) relative to adjustments to the 100-year Federal Insurance Administration (FIA) flood plain are to be obtained by the applicant after the proposed drainage facilities are constructed.</p>	<p>Applicant (Civil Engineer)</p>	<p>Receipt of CLOMR(s)</p>	<ol style="list-style-type: none"> 1. Federal Insurance Administration 2. LACDPW 3. Upon Completion of Facilities
<p>SP 4.2-5. Prior to the approval and recordation of each subdivision map, a Hydrology Plan, Drainage Plan, and Grading Plan (including an Erosion Control Plan if required) for each subdivision must be prepared by the applicant of the subdivision map to ensure that no significant erosion, sedimentation, or flooding impacts would occur during or after site development. These plans shall be prepared to the satisfaction of the County of Los Angeles Department of Public Works.</p>	<p>Applicant (Project Engineer)</p>	<p>Approval of Final Hydrology Plan, Final Drainage Plan, and Final</p>	<ol style="list-style-type: none"> 1. LACDPW, FCD and Geology/Soils Section 2. LACDPW, FCD and Geology/Soils Section 3. Prior to Recording of Each Subdivision Map

8.0 Mitigation Monitoring Plan

<p>SP 4.2-6. Install permanent erosion control measures, such as desilting and debris basins, drainage swales, slope drains, storm drain inlet/outlet protection, and sediment traps in order to prevent sediment and debris from the upper reaches of the drainage areas which occur on the Newhall Ranch site from entering storm drainage improvements. These erosion control measures shall be installed to the satisfaction of the County of Los Angeles Department of Public Works.</p>	<p>Applicant (Project Engineer)</p>	<p>Field Verification</p>	<p>1. LACDPW, FCD 2. LACDPW, FCD 3. Prior to Issuance of Occupancy Permits</p>
<p>SP 4.2-7. The applicant for any subdivision map permitting construction shall satisfy all applicable requirements of the NPDES Program in effect in Los Angeles County to the satisfaction of the County of Los Angeles Department of Public Works. These requirements currently include preparation of an USWMP containing design features and Best Management Practices (BMPs) appropriate and applicable to the subdivision. In addition, the requirements currently include preparation of a Storm Water Management Pollution Prevention Plan (SWPPP) containing design features and BMPs appropriate and applicable to the subdivision. The County of Los Angeles Department of Public Works shall monitor compliance with those NPDES requirements.</p>	<p>Applicant (Construction Superintendent)</p>	<p>Submittal of USWMP and SWPPP to RWQCBLAR Field Verification</p>	<p>1. RWQCBLAR 2. LACDPW, Building and Safety 3. Prior to Grading and During Grading Operations</p>
<p>LV 4.3-1. Prior to issuance of a building permit, and as a part of the design level hydrology study and facilities plan, the project applicant shall submit to LACDPW for review and approval of drainage plans showing the incorporation into the project of those water quality and hydrologic control project design features (i.e., the post-development water quality and hydrologic control BMPs)(the "PDFs"), identified in this Section 4.3, which PDFs shall be designed to meet the standards set forth in this Section 4.3, including the sizing, capacity, and volume reduction performance standards set forth herein, all as summarized in Table 4.3-17.</p>	<p>Applicant</p>	<p>Review of Drainage Plans</p>	<p>1. LACDPW 2. LACDPW 3. Prior to Issuance of Building Permits</p>

8.0 Mitigation Monitoring Plan

<p>LV 4.3-2. Prior to issuance of a building permit, and as a part of the design level hydrology study and facilities plan, the project applicant shall submit to planning staff for review a Landscape and Integrated Pest Management Plan, identified in this Section 4.3, which shall be designed to meet the standards set forth as follows.</p>	<p>Applicant</p>	<p>Review of Landscape and Integrated Pest Management Plan</p>	<p>1. LACDRP</p>
<p>A Landscape and Integrated Pest Management Plan shall be developed and implemented for common area landscaping within the Landmark Village Project that addresses integrated pest management (IPM) and pesticide and fertilizer application guidelines. IPM is a strategy that focuses on long-term prevention or suppression of pest problems (i.e., insects, diseases and weeds) through a combination of techniques including: using pest-resistant plants; biological controls; cultural practices; habitat modification; and the judicious use of pesticides according to treatment thresholds, when monitoring indicates pesticides are needed because pest populations exceed established thresholds. The Landscape and Integrated Pest Management Plan will address the following components:</p>			<p>2. LACDRP</p>
<ol style="list-style-type: none"> 1. Pest identification. 2. Practices to prevent pest incidence and reduce pest buildup. 3. Monitoring to examine vegetation and surrounding areas for pests to evaluate trends and to identify when controls are needed. 4. Establishment of action thresholds that trigger control actions. 5. Pest control methods - cultural, mechanical, environmental, biological, and appropriate pesticides. 6. Pesticide management - safety (e.g., Material Safety Data Sheets, precautionary statements, protective equipment); regulatory requirements; spill mitigation; groundwater and surface water protection measures associated with pesticide use; and pesticide applicator certifications, licenses, and training (i.e., all pesticide applicators must be certified by the California Department of Pesticide Regulation). 7. Fertilizer management - soil assessment, fertilizer types, application methods, and storage and handling. 			<p>3. Prior to Issuance of Building Permits</p>
<p>4.4 BIOTA</p>			
<p>SP 4.6-1. The restoration mitigation areas located within the River Corridor Special Management Area (SMA) shall be in areas that have been disturbed by previous uses or activities. Mitigation shall be conducted only on sites where soils, hydrology, and microclimate conditions are suitable for riparian habitat. First priority will be given to those restorable areas that occur adjacent to existing patches (areas) of native habitat that support sensitive species, particularly endangered or threatened species. The goal is to increase habitat patch size and connectivity with other existing habitat patches while restoring habitat values that will benefit sensitive species. <i>(This measure is implemented primarily through LV4.4-1 and the development of a Comprehensive Mitigation Implementation Plan (CMIP) for the Newhall Ranch Specific Plan, of which the Landmark Village project is the first subdivision. Mitigation measure LV 4.4-29 provides the replacement ratios for vegetation restoration and measure LV4.4-30 designates the location priorities for revegetation efforts.)</i></p>	<p>Applicant (Project Biologist)</p>	<p>Field Verification</p>	<ol style="list-style-type: none"> 1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plans

8.0 Mitigation Monitoring Plan

<p>SP 4.6-2. A qualified biologist shall prepare or review revegetation plans. The biologist shall also monitor the restoration effort from its inception through the establishment phase. <i>(This measure will be implemented through the applicant contracting with a biological consulting company acceptable to the County to prepare the revegetation plans for the Landmark Village project.)</i></p>	<p>Applicant (Project Biologist)</p>	<p>Revegetation Plan Comments and Documentation of Restoration Monitoring</p>	<p>1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plans and Monitor During Restoration Effort</p>
<p>SP 4.6-3. Revegetation Plans may be prepared as part of a California Department of Fish and Game 1603 Streambed Alteration Agreement and/or an U.S. Army Corps of Engineers Section 404 Permit, and shall include:</p> <ul style="list-style-type: none"> • Input from both the Project proponent and resource agencies to assure that the Project objectives applicable to the River Corridor SMA and the criteria of this RMP are met; and • The identification of restoration/mitigation sites to be used. This effort shall involve an analysis of the suitability of potential sites to support the desired habitat, including a description of the existing conditions at the site(s) and such base line data information deemed necessary by the permitting agency. <i>(This measure will be implemented for the Landmark Village project through compliance with the master 1602 Streambed Alteration Agreement and the Section 404 Permit processed by the Newhall Ranch Company associated with the Final EIS/EIR for the Newhall Ranch RMDP/SCP project.)</i> 	<p>Applicant (Project Biologist)</p>	<p>Revegetation Plan Review</p>	<p>1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan</p>
<p>SP 4.6-4. The revegetation effort shall involve an analysis of the site conditions such as soils and hydrology so that site preparation needs can be evaluated. The revegetation plan shall include the details and procedures required to prepare the restoration site for planting (i.e., grading, soil preparation, soil stockpiling, soil amendments, etc.), including the need for a supplemental irrigation system, if any. <i>(This measure will be implemented through the detailed revegetation plan requirements provided within the Landmark Village mitigation measure LV4.4-1.)</i></p>	<p>Applicant (Project Biologist)</p>	<p>Revegetation Plan Review</p>	<p>1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan</p>
<p>SP 4.6-5. Restoration of riparian habitats within the River Corridor SMA shall use plant species native to the Santa Clara River. Cuttings or seeds of native plants shall be gathered within the River Corridor SMA or purchased from nurseries with local supplies to provide good genetic stock for the replacement habitats. Plant species used in the restoration of riparian habitat shall be listed on the approved project plant palette (Specific Plan Table 2.6-1, Recommended Plant Species for Habitat Restoration in the River Corridor SMA) or as approved by the permitting state and federal agencies. <i>(This measure will be implemented through the CMIP and mitigation measure LV4.4-1 for the Landmark Village project.)</i></p>	<p>Applicant (Project Biologist)</p>	<p>Revegetation Plan Review Field Verification</p>	<p>1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan and Monitor During Restoration Effort</p>
<p>SP 4.6-6. The final revegetation plans shall include notes that outline the methods and procedures for the installation of the plant materials. Plant protection measures identified by the project biologist shall be incorporated into the planting design/layout. <i>(This measure will be implemented through the CMIP and mitigation measures LV 4.4-1 and LV 4.4-32 for the Landmark Village project.)</i></p>	<p>Applicant (Project Biologist)</p>	<p>Revegetation Plan Review</p>	<p>1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan</p>

8.0 Mitigation Monitoring Plan

<p>SP 4.6-7. The revegetation plan shall include guidelines for the maintenance of the mitigation site during the establishment phase of the plantings. The maintenance program shall contain guidelines for the control of non-native plant species, the maintenance of the irrigation system, and the replacement of plant species. <i>(This measure will be implemented through compliance with mitigation measures LV4.4-34 and LV4.4-37 for the Landmark Village project.)</i></p>	<p>Applicant (Project Biologist)</p>	<p>Revegetation Plan Review</p>	<p>1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan</p>
<p>SP 4.6-8. The revegetation plan shall provide for monitoring to evaluate the growth of the developing habitat. Specific performance goals for the restored habitat shall be defined by qualitative and quantitative characteristics of similar habitats on the river (e.g., density, cover, species composition, structural development). The monitoring effort shall include an evaluation of not only the plant material installed, but the use of the site by wildlife. The length of the monitoring period shall be determined by the permitting state and/or federal agency. <i>(This measure will be implemented through mitigation measures LV4.4-31 and LV4.4-34 for the Landmark Village project.)</i></p>	<p>Applicant (Project Biologist)</p>	<p>Revegetation Plan Review</p>	<p>1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan</p>
<p>SP 4.6-9. Monitoring reports for the mitigation site shall be reviewed by the permitting state and/or federal agency. <i>(This measure will be implemented through the mitigation measures LV4.4-40 and LV4.4-41 for the Landmark Village project.)</i></p>	<p>Applicant (Project Biologist)</p>	<p>Review of Monitoring Reports</p>	<p>1. ACOE and CDFG 2. ACOE and CDFG 3. During Revegetation Activities</p>
<p>SP 4.6-10. Contingency plans and appropriate remedial measures shall also be outlined in the revegetation plan. <i>(This measure will be implemented through mitigation measures LV4.4-33 and LV 4.4-34 for the Landmark Village project.)</i></p>	<p>Applicant (Project Biologist)</p>	<p>Revegetation Plan Review</p>	<p>1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan</p>
<p>SP 4.6-11. Habitat enhancement as referred to in this document means the rehabilitation of areas of native habitat that have been moderately disturbed by past activities (e.g., grazing, roads, oil and natural gas operations, etc.) or have been invaded by non-native plant species such as giant cane (<i>Arundo donax</i>) and tamarisk (<i>Tamarix</i> sp.). <i>(This measure will be implemented through mitigation measures LV4.4-36 and LV 4.4-37 for the Landmark Village project.)</i></p>	<p>Applicant (Project Biologist)</p>	<p>Revegetation Plan Review</p>	<p>1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan</p>
<p>SP 4.6-12. Removal of grazing is an important means of enhancement of habitat values. Without ongoing disturbance from cattle, many riparian areas will recover naturally. Grazing except as permitted as a long-term resource management activity will be removed from the River Corridor SMA pursuant to the Long-Term Management Plan set forth in Section 4.6 of the Specific Plan EIR. <i>(This measure will be implemented in accordance with the conditions of approval for the Landmark Village project.)</i></p>	<p>Land Owner/SMA Manager</p>	<p>Mitigation Monitoring Reports</p>	<p>1. LACDRP 2. LACDRP 3. Mitigation Monitoring Reports under Conditional Use Permit (CUP) Condition No. 8</p>
<p>SP 4.6-13. To provide guidelines for the installation of supplemental plantings of native species within enhancement areas, a revegetation plan shall be prepared prior to implementation of mitigation (see guidelines for revegetation plans above). These supplemental plantings will be composed of plant species similar to those growing in the existing habitat patch (see Specific Plan Table 2.6-1). <i>(This measure will be implemented through mitigation measures LV4.4-1 and LV 4.4-34 for the Landmark Village project.)</i></p>	<p>Applicant (Project Biologist)</p>	<p>Revegetation Plan Review</p>	<p>1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan</p>

8.0 Mitigation Monitoring Plan

<p>SP 4.6-14. Not all enhancement areas will necessarily require supplemental plantings of native species. Some areas may support conditions conducive for rapid “natural” re-establishment of native species. The revegetation plan may incorporate means of enhancement to areas of compacted soils, poor soil fertility, trash or flood debris, and roads as a way of enhancing riparian habitat values. <i>(This measure will be implemented through the CMIP and mitigation measure LV4.4-1 for the Landmark Village project.)</i></p>	<p>Applicant (Project Biologist)</p>	<p>Revegetation Plan Review</p>	<p>1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan</p>
<p>SP 4.6-15. Removal of non-native species such as giant cane (<i>Arundo donax</i>), salt cedar or tamarisk (<i>Tamarix</i> sp.), tree tobacco (<i>Nicotiana glauca</i>), castor bean (<i>Ricinus communis</i>), if included in a revegetation plan to mitigate impacts, shall be subject to the following standards: (1) First priority shall be given to those habitat patches that support or have a high potential for supporting sensitive species, particularly endangered or threatened species; (2) All non-native species removals shall be conducted according to a resource agency approved exotics removal program; and (3) removal of non-native species in patches of native habitat shall be conducted in such a way as to minimize impacts to the existing native riparian plant species. <i>(This measure will be implemented through mitigation measures LV4.4-36 and LV 4.4-37 for the Landmark Village project.)</i></p>	<p>Applicant (Project Biologist)</p>	<p>Revegetation Plan Review</p>	<p>1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan</p>
<p>SP 4.6-16. Mitigation banking activities for riparian habitats will be subject to state and federal regulations and permits. Mitigation banking for oak resources shall be conducted pursuant to the Oak Resources Replacement Program. Mitigation banking for elderberry scrub shall be subject to approval of plans by the County Forester. <i>(This measure is implemented through mitigation measure LV 4.4-1 and the development of a CMIP.)</i></p>	<p>Applicant (Project Biologist)</p>	<p>State and Federal Permits; Submittal of Permits Oak Resources;</p>	<p>1. ACOE, CDFG 2. ACOE, CDFG, 3. Prior to Approval of Mitigation Banking Program</p>
<p>SP 4.6-17. Access to the River Corridor SMA for hiking and biking shall be limited to the river trail system (including the Regional River Trail and various Local Trails) as set forth in this Specific Plan. (1) The River trail system shall be designed to avoid impacts to existing native riparian habitat, especially habitat areas known to support sensitive species. Where impacts to riparian habitat are unavoidable, disturbance shall be minimized and mitigated as outlined above under Mitigation Measures 4.6-1 through 4.6-8. (2) Access to the River Corridor SMA will be limited to daytime use of the designated trail system. (3) Signs indicating that no pets of any kind will be allowed within the River Corridor SMA, with the exception that equestrian use is permitted on established trails, shall be posted along the River Corridor SMA. (4) No hunting, fishing, or motor or off-trail bike riding shall be permitted. (5) The trail system shall be designed and constructed to minimize impacts on native habitats.</p>	<p>Applicant (Design) SMA Manager (Access)</p>	<p>Review of Trails Plans, Tract Maps, and/or Site Plans (Design) Field Verification (Access)</p>	<p>1. LA County Department of Parks and Recreation 2. LA County Department of Parks and Recreation 3. Prior to Approval of Trails Plans, Tract Maps, and/or Site Plans, as applicable. 1. LACDRP 2. LACDRP 3. Upon Complaint</p>

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<p>SP 4.6-19. The following are the standards for design of transition areas:</p> <p>In all locations where there is no steep grade separation between the River Corridor and development, a trail shall be provided along this edge;</p> <ul style="list-style-type: none"> • Native riparian plants shall be incorporated into the landscaping of the transition areas between the River Corridor SMA and adjacent development areas where feasible for their long-term survival. Plants used in these areas shall be those listed on the approved plant palette (Specific Plan Table 2.6-2 of the Resource Management Plan [Recommended Plants for Transition Areas Adjacent to the River Corridor SMA]); • Roads and bridges that cross the River Corridor SMA shall have adequate barriers at their perimeters to discourage access to the River Corridor SMA adjacent to the structures; • Where bank stabilization is required to protect development areas, it shall be composed of ungrouted rock, or buried bank stabilization as described in subsection 2.5.2.a., except at bridge crossings and other locations where public health and safety requirements necessitate concrete or other bank protection; and 	Applicant	Review of Trails Plans, Tract Maps, and/or Site Plans	<ol style="list-style-type: none"> 1. LACDRP and LACDPW for Bank Stabilization 2. LACDRP and LACDPW for Bank Stabilization
<ul style="list-style-type: none"> • A minimum 100-foot-wide buffer adjacent to the Santa Clara River should be required between the top river side of bank stabilization and development within the Land Use Designations Residential Low Medium, Residential Medium, Mixed-Use and Business Park unless, through Planning Director review in consultation with the staff biologist, it is determined that a lesser buffer would adequately protect the riparian resources within the River Corridor or that a 100-foot-wide buffer is infeasible for physical infrastructure planning. The buffer area may be used for public infrastructure, such as flood control access; sewer, water, and utility easements; abutments; trails and parks, subject to findings of consistency with the Specific Plan and applicable County policies. <i>(This measure is implemented through the Los Angeles County Department of Parks and Recreation review of the project design during the Subdivision Committee review process and conditions of approval.)</i> 			<ol style="list-style-type: none"> 3. Prior to Approval of Trails Plans, Tract Maps, and/or Site Plans, as applicable
<p>SP 4.6-20. The following guidelines shall be followed during any grading activities that take place within the River Corridor SMA: Grading perimeters shall be clearly marked and inspected by the project biologist prior to grading occurring within or immediately adjacent to the River Corridor SMA. The project biologist shall work with the grading contractor to avoid inadvertent impacts to riparian resources. <i>(This measure will be</i></p>	Applicant (Project Biologist)	Field Verification	<ol style="list-style-type: none"> 1. LACDPW 2. LACDPW 3. Prior to and During Grading Activities
<p>SP 4.6-21. Upon final approval of the Newhall Ranch Specific Plan, the Special Management Area designation for the River Corridor SMA shall become effective. The permitted uses and development standards for the SMA are governed by the Development Regulations, Chapter 3 of the Specific Plan. <i>(This measure was implemented with the approval of the Newhall Ranch Specific Plan. The Landmark Village project was</i></p>	Los Angeles County	None Required	<ol style="list-style-type: none"> 1. Los Angeles County 2. Los Angeles County 3. Upon Effective Date of Zoning Ordinance

8.0 Mitigation Monitoring Plan

<p>SP 4.6-22. Upon completion of development of all land uses, utilities, roads, flood control improvements, bridges, trails, and other improvements necessary for implementation of the Specific Plan within the River Corridor in each subdivision allowing construction within or adjacent to the River Corridor, a permanent, non-revocable <i>conservation and public access easement</i> shall be offered to the County of Los Angeles pursuant to Mitigation Measure SP 4.6-23, below, over the portion of the River Corridor SMA within that subdivision.</p>	<p>Land Owner</p>	<p>Offer of Dedication of Easement</p>	<p>1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Submittal of Monitoring Report(s) Under CUP Condition No. 8</p>
<p>SP 4.6-23. The River Corridor SMA <i>Conservation and Public Access Easement</i> shall be offered to the County of Los Angeles prior to the transfer of the River Corridor SMA ownership, or portion thereof to the management entity described in Mitigation Measure 4.6-26 below. <i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project.)</i></p>	<p>Land Owner</p>	<p>Offer of Dedication of Easement</p>	<p>1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Transfer of River Corridor Ownership Under 4.6-26</p>
<p>SP 4.6-24. The River Corridor SMA <i>Conservation and Public Access Easement</i> shall prohibit grazing, except as a long-term resource management activity, and agriculture within the River Corridor and shall restrict recreation use to the established trail system.</p> <p>Agricultural land uses and grazing for purposes other than long-term resource management activities within the River Corridor shall be extended in the event of the filing of any legal action against Los Angeles County challenging final approval of the Newhall Ranch Specific Plan and any related project approvals or certification of the Final EIR for Newhall Ranch. Agricultural land uses and grazing for purposes other than long-term resource management activities within the River Corridor shall be extended by the time period between the filing of any such legal action and the entry of a final judgment by a court with appropriate jurisdiction, after exhausting all rights of appeal, or execution of a final settlement agreement between all parties to the legal action, whichever occurs first. <i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project.)</i></p>	<p>Land Owner</p>	<p>Review of Easement Document</p>	<p>1. LACDRP 2. LACDRP 3. Prior to Acceptance of Easement by County</p>
<p>SP 4.6-25. The River Corridor SMA conservation and public access easement shall be consistent in its provisions with any other conservation easements to state or federal resource agencies which may have been granted as part of mitigation or mitigation banking activities. <i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project.)</i></p>	<p>Land Owner</p>	<p>Review of Conservation Easement /and Resource Permits</p>	<p>1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Recordation of River Corridor SMA Conservation Easement</p>

8.0 Mitigation Monitoring Plan

<p>SP 4.6-26. Prior to the recordation of the River Corridor SMA <i>Conservation and Public Access Easement</i> as specified in Mitigation Measure 4.6-23 above, the land owner shall provide a plan to the County for the permanent ownership and management of the River Corridor SMA, including any necessary financing. This plan shall include the transfer of ownership of the River Corridor SMA to the Center for Natural Lands Management, or if the Center for Natural Lands Management is declared bankrupt or dissolved, ownership will transfer or revert to a <i>joint powers authority</i> consisting of Los Angeles County (4 members), the City of Santa Clarita (2 members), and the Santa Monica Mountains Conservancy (2 members). <i>(This measure is</i></p>	<p>Land Owner</p>	<p>Approval of Management Plan by County</p>	<p>1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Recordation of River Corridor SMA Conservation Easement</p>
<p>SP 4.6-26a. Two types of habitat restoration may occur in the High Country SMA: 1) riparian revegetation activities principally in Salt Creek Canyon and 2) oak tree replacement in, or adjacent to, existing oak woodlands and savannahs.</p> <ul style="list-style-type: none"> Mitigation requirements for riparian revegetation activities within the High Country SMA are the same as those for the River Corridor SMA and are set forth in Mitigation Measures 4.6-1 through 4.6-11 and 4.6-13 through 4.6-16 above. Mitigation requirements for oak tree replacement are set forth in Mitigation Measure 4.6-48 below. <i>(This measure is implemented through mitigation measure LV4.4-1 and the development of a CMIP.)</i> 	<p>Land Owner (Project Biologist)</p>	<p>Field Verification</p>	<p>1. ACOE, CDFG (Riparian) 2. ACOE, CDFG (Riparian) 3. Approval of Revegetation Plans</p>
<p>SP 4.6-27. Removal of grazing from the High Country SMA except for those grazing activities associated with long-term resource management programs, is a principal means of enhancing habitat values in the creeks, brushland and woodland areas of the SMA. The removal of grazing in the High Country SMA is discussed below under (b) 4. Long Term Management. All enhancement activities for riparian habitat within the High Country SMA shall be governed by the same provisions as set forth for enhancement in the River Corridor SMA. Specific Plan Table 2.6-3 of the Resource Management Plan provides a list of appropriate plant species for use in enhancement areas in the High Country SMA. <i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project and the Newhall Ranch Specific Plan.)</i></p>	<p>Land Owner/Center for Natural land Management (CNLM)</p>	<p>Enhancement Plans and Field Verification</p>	<p>1. LACDRP 2. CNLM 3. During Enhancement Activities</p>
<p>SP 4.6-28. Mitigation banking activities for riparian habitats will be subject to state and federal regulations and permits. Mitigation banking for oak resources, shall be conducted pursuant to the Oak Resource Replacement Program. Mitigation banking for elderberry scrub shall be subject to approval of plans by the County Forester. <i>(This measure is implemented through mitigation measure LV4.4-1 and the development of a CMIP.)</i></p>	<p>Applicant (Project Biologist)</p>	<p>State and Federal Permits; Submittal of Permits Oak Resources; Review of Oak Tree Permit Elderberry Scrub; Review of Initial Study</p>	<p>1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Mitigation Banking Program 1. LACDRP 2. LACDRP 3. Approval of Oak Tree Permit 1. LACDRP 2. LACDRP 3. Prior to Grading</p>
<p>SP 4.6-29 Access to the High Country SMA will be limited to day time use of the designated trail system. <i>(Not applicable.)</i></p>			

8.0 Mitigation Monitoring Plan

SP 4.6-30 No pets of any kind will be allowed within the High Country SMA, with the exception that equestrian use is permitted on established trails. <i>(Not applicable.)</i>			
SP 4.6-31 No hunting, fishing, or motor or trail bike riding shall be permitted. <i>(Not applicable.)</i>			
SP 4.6-32 The trail system shall be designed and constructed to minimize impacts on native habitats. <i>(Not applicable.)</i>			
SP 4.6-33 Construction of buildings and other structures (such as patios, decks, etc.) shall only be permitted upon developed pads within Planning Areas OV-04, OV-10, PV-02, and PV-28 and shall not be permitted on southerly slopes facing the High Country SMA (Planning Area HC-01) or in the area between the original SEA 20 boundary and the High Country boundary. If disturbed by grading, all southerly facing slopes which adjoin the High Country SMA within those Planning Areas shall have the disturbed areas revegetated with compatible trees, shrubs, and herbs from the list of plant species for south and west facing slopes as shown in Table 2.6-3, Recommended Plant Species For Use In Enhancement Areas In The High Country. Transition from the development edge to the natural area shall also be controlled by the standards of wildfire fuel modification zones as set forth in Mitigation Measure SP 4.6-49. Within fuel modification areas, trees and herbs from Table 2.6-3 of the Resource Management Plan should be planted toward the top of slopes; and trees at lesser densities and shrubs planted on lower slopes. <i>(Not applicable.)</i>			
SP 4.6-34. Grading perimeters shall be clearly marked and inspected by the project biologist prior to impacts occurring within or adjacent to the High Country SMA. <i>(This measure will be implemented through mitigation measures LV4.4-8 through LV4.4-26.)</i>	Applicant (Project Biologist)	Field Verification	1. LACDPW 2. LACDPW 3. Prior To and During Grading
SP 4.6-35. The project biologist shall work with the grading contractor to avoid inadvertent impacts to biological resources outside of the grading area. <i>(This measure will be implemented through mitigation measure LV 4.4-18.)</i>	Applicant (Project Biologist)	Field Verification	1. LACDPW 2. LACDPW 3. During Grading
SP 4.6-36 Upon final approval of the Newhall Ranch Specific Plan, the Special Management Area designation for the High Country SMA shall become effective. The permitted uses and development standards for the SMA are governed by the Development Regulations, Chapter 3. <i>(This measure was implemented with the approval of the Newhall Ranch Specific Plan. The Landmark Village project was designed in compliance with the development standards of the Special management Areas and the Significant Ecological Areas compatibility criteria)</i>			
SP 4.6-37. The High Country SMA shall be offered for dedication in three approximately equal phases of approximately 1,400 acres each proceeding from north to south, as follows: 1. The first offer of dedication will take place with the issuance of the 2,000 th residential building permit of Newhall Ranch; 2. The second offer of dedication will take place with the issuance of the 6,000 th residential building permit of Newhall	Land Owner	Offer of Dedication	1. LA County Department of Regional Planning 2. LA County Department of Building and Safety

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Ranch; 3. The remaining offer of dedication will be completed by the 11,000 th residential building permit of Newhall Ranch; and 4. The Specific Plan applicant shall provide a quarterly report to the Departments of Public Works and Regional Planning which indicates the number of residential building permits issued in the Specific Plan area by subdivision map number. <i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project and the provision of the Newhall Ranch Specific Plan.)</i>			3. Upon Issuance of Building Permits
SP 4.6-38. Prior to dedication of the High Country SMA, a <i>conservation and public access easement</i> shall be offered to the County of Los Angeles and a conservation and management easement offered to the Center for Natural Lands Management. The High Country SMA <i>Conservation and Public Access Easement</i> shall be consistent in its provisions with any other <i>conservation easement</i> s to state or federal resource agencies which may have been granted as part of mitigation or mitigation banking activities. <i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project and the provision of the Newhall Ranch Specific Plan.)</i>	Land Owner	Review of Easement Document	1. LA County Department of Regional Planning 2. LA County Department of Building and Safety 3. Upon Issuance of Building Permits
SP 4.6-39. The High Country SMA conservation and public access easement shall prohibit grazing within the High Country, except for those grazing activities associated with the long-term resource management programs, and shall restrict recreation to the established trail system. <i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project and the provision of the Newhall Ranch Specific Plan.)</i>	Land Owner	Review of Easement Document	1. LACDRP 2. LACDRP 3. Prior to Acceptance of Easement by Los Angeles County
SP 4.6-40. The High Country SMA conservation and public access easement shall be consistent in its provisions with any other conservation easements to state or federal resource agencies which may have been granted as part of mitigation or mitigation banking activities. <i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project and the provision of the Newhall Ranch Specific Plan.)</i>	Land Owner	Review of Conservation Easement and Resource Permits	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Recordation of High Country SMA Conservation Easement
SP 4.6-41. The High Country SMA shall be offered for dedication in fee to a <i>joint powers authority</i> consisting of Los Angeles County (4 members), the City of Santa Clarita (2 members), and the Santa Monica Mountains Conservancy (2 members). The <i>joint powers authority</i> will have overall responsibility for recreation within and conservation of the High Country. <i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project and the provision of the Newhall Ranch Specific Plan.)</i>	Land Owner	Offer of Dedication	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Issuance of Building Permits
SP 4.6-42. An appropriate type of service or assessment district shall be formed under the authority of the Los Angeles County Board of Supervisors for the collection of up to \$24 per single family detached dwelling unit per year and \$15 per single family attached dwelling unit per year, excluding any units designated as Low and Very Low affordable housing units pursuant to Section 3.10, Affordable Housing Program of the Specific Plan. This revenue would be assessed to the homeowner beginning with the occupancy of each dwelling unit and distributed to the <i>joint powers authority</i> for the purposes of recreation, maintenance, construction, conservation and related activities within the <i>High Country Special Management Area</i> . <i>(This</i>	Land Owner	Approval of Assessment District Report by County	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Issuance of First Residential Occupancy Permit

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<p>SP 4.6-43. Suitable portions of <i>Open Area</i> may be used for mitigation of riparian, <i>oak resources</i>, or elderberry scrub. Mitigation activities within <i>Open Area</i> shall be subject to the following requirements, as applicable: River Corridor SMA Mitigation Requirements, including: Mitigation Measures 4.6-1 through 4.6-11 and 4.6-13 through 4.6-16; and High Country SMA Mitigation Requirements, including: Mitigation Measures 4.6-27, 4.6-29 through 4.6-42; and Mitigation Banking – Mitigation Measure 4.6-16. <i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project and the provision of the Newhall Ranch Specific Plan.)</i></p>	<p>Manager of Open Area</p>	<p>Review of Mitigation Plans/Field Verification</p>	<p>1. ACOE; CDFG or Los Angeles County as applicable 2. ACOE; CDFG or Los Angeles County as applicable 3. During Mitigation</p>
<p>SP 4.6-44 Drainages with flows greater than 2,000 cfs will have soft bottoms. Bank protection will be of ungrouted rock, or buried bank stabilization as described in Section 2.5.2.a, except at bridge crossings and other areas where public health and safety considerations require concrete or other stabilization. <i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project and the provision of the Newhall Ranch Specific Plan.)</i></p>			
<p>SP 4.6-45 The precise alignments and widths of major drainages will be established through the preparation of drainage studies to be approved by the County at the time of subdivision maps which permit construction. <i>(This measure is implemented through the Los Angeles County Department of Public Works review of the project design during the Subdivision Committee review process and conditions of approval.)</i></p>			
<p>SP 4.6-46. While Open Area is generally intended to remain in a natural state, some grading may take place, especially for parks, major drainages, trails, and roadways. Trails are also planned to be within Open Area. <i>(This measure is implemented through the Los Angeles County Subdivision Committee review process and conditions of approval.)</i></p>	<p>Land Owner</p>	<p>Review of Mitigation Plans/Field Verification</p>	<p>1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Issuance of Building Permits</p>
<p>SP 4.6-47. At the time that final subdivision maps permitting construction are recorded, the Open Area within the map will be offered for dedication to the Center for Natural Lands Management. Community Parks within Open Area are intended to be public parks. Prior to the offer of dedication of Open Area to the Center for Natural Lands Management, all necessary conservation and public access easements, as well as easements for infrastructure shall be offered to the County. <i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project and the provision of the Newhall Ranch Specific Plan.)</i></p>	<p>Land Owner</p>	<p>Review of Conservation Easement</p>	<p>1. LA County Department of Regional Planning 2. Center for Natural Lands Management 3. Prior to Recordation of Maps Permitting Construction</p>

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<p>SP 4.6-47a. Mitigation Banking will be permitted within the River Corridor SMA, the High Country SMA, and the <i>Open Area land use designations</i>, subject to the following requirements:</p> <p>(1) Mitigation banking activities for riparian habitats will be subject to state and federal regulations, and shall be conducted pursuant to the mitigation requirements set forth in Mitigation Measure 4.6-1 through 4.6-15 above;</p> <p>(2) Mitigation banking for oak resources shall be conducted pursuant to 4.6-48 below; and</p> <p>(3) Mitigation banking for elderberry scrub shall be subject to approval of plans by the County Forester. <i>(This measure is implemented in accordance with the conditions of approval for the Landmark Village project and the provision of the Newhall Ranch Specific Plan. No elderberry scrub would be impacted by the Landmark Village project)</i></p>	Applicant (Project Biologist)	State and Federal Permits;	1. ACOE, CDFG
		Submittal of Permits	2. ACOE, CDFG
		Oak Resources; Review of Oak Tree Permit	3. Prior to Approval of Mitigation Banking Program
			1. LACDRP
Elderberry Scrub; Review of Initial Study	2. LACDRP		
	3. Approval of Oak Tree Permit		
<p>SP 4.6-48. Standards for the restoration and enhancement of oak resources within the High Country SMA and the Open Area include the following (oak resources include oak trees of the sizes regulated under the County Oak Tree Ordinance, southern California black walnut trees, Mainland cherry trees, and Mainland cherry shrubs):</p> <p>(1) To mitigate the impacts to oak resources which may be removed as development occurs in the Specific Plan Area, replacement trees shall be planted in conformance with the oak tree ordinance in effect at that time;</p> <p>(2) Oak resource species obtained from the local gene pool shall be used in restoration or enhancement;</p> <p>(3) Prior to recordation of construction-level final subdivision maps, an oak resource replacement plan shall be prepared that provides the guidelines for the oak tree planting and/or replanting.</p>	Applicant (Project Biologist)	Oak Tree Permit(s)	1. LA County Forester
			<p>The Plan shall be reviewed by the Los Angeles Department of Regional Planning and the County Forester and shall include the following: site selection and preparation, selection of proper species including sizes and planting densities, protection from herbivores, site maintenance, performance standards, remedial actions, and a monitoring program; and</p> <p>All plans and specifications shall follow County oak tree guidelines, as specified in the County Oak Tree Ordinance.</p> <p><i>(This measure will be implemented through Landmark Village mitigation measures LV4.4-6, LV4.4-7, and LV4.4-53.)</i></p>
			3. Prior to Final Subdivision Map Recordation

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<p>SP 4.6-49. To minimize the potential exposure of the development areas, Open Area, and the SMAs to fire hazards, the Specific Plan is subject to the requirements of the Los Angeles County Fire Protection District (LACFPD), which provides fire protection for the area. At the time of final subdivision maps permitting construction in development areas that are adjacent to Open Area and the High Country SMA, a wildfire fuel modification plan shall be prepared in accordance with the fuel modification ordinance standards in effect at that time and shall be submitted for approval to the County Fire Department. <i>(This measure is implemented through the Los Angeles County Fire Department review of the project design during the Subdivision Committee review process and conditions of approval, including fuel modification plan approval.)</i></p>	<p>Applicant</p>	<p>Review of Wildfire Fuel Modification Plan</p>	<p>1. LA County Forester 2. LA County Forester 3. Prior to Recordation of Final Subdivision Maps</p>
<p>SP 4.6-49 To minimize the potential exposure of the development areas, Open Area, and the SMAs to fire hazards, the Specific Plan is subject to the requirements of the Los Angeles County Fire Protection District (LACFPD), which provides fire protection for the area. At the time of final subdivision maps permitting construction in development areas that are adjacent to Open Area and the High Country SMA, a wildfire fuel modification plan shall be prepared in accordance with the fuel modification ordinance standards in effect at that time and shall be submitted for approval to the County Fire Department. <i>(This measure is implemented through the Los Angeles County Fire Department review of the project design during the Subdivision Committee review process and conditions of approval, including fuel modification plan approval.)</i></p>			
<p>SP 4.6-50. The wildfire fuel modification plan shall depict a fuel modification zone the size of which shall be consistent with the County fuel modification ordinance requirements. Within the zone, tree pruning, removal of dead plant material and weed and grass cutting shall take place as required by the fuel modification ordinance. <i>(This measure is implemented through the Los Angeles County Fire Department review of the project design during the Subdivision Committee review process and conditions of approval, including fuel modification plan approval.)</i></p>	<p>Applicant (Project Biologist)</p>	<p>Review of Wildfire Fuel Modification Plan</p>	<p>1. LA County Forester 2. LA County Forester 3. Prior to Recordation of Final Subdivision Maps</p>
<p>SP 4.6-51. In order to enhance the habitat value of plant communities which require fuel modification, fire retardant plant species containing habitat value may be planted within the fuel modification zone. Typical plant species suitable for Fuel Modification Zones are indicated in Specific Plan Table 2. 6-5 of the Resource Management Plan. Fuel modification zones adjacent to SMAs and Open Areas containing habitat of high value such as oak woodland and savannas shall utilize a more restrictive plant list which shall be reviewed by the County Forester. <i>(This measure is implemented through the Los Angeles County Fire Department and Department of Regional Planning review of the project design during the Subdivision Committee review process and conditions of approval, including fuel modification plan approval.)</i></p>	<p>Applicant (Project Biologist)</p>	<p>Review of Wildfire Fuel Modification Plan</p>	<p>1. LA County Forester 2. LA County Forester 3. Prior to Recordation of Final Subdivision Maps</p>

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<p>SP 4.6-52. The wildfire fuel modification plan shall include the following construction period requirements: (a) a fire watch during welding operations; (b) spark arresters on all equipment or vehicles operating in a high fire hazard area; (c) designated smoking and non-smoking areas; and (d) water availability pursuant to the County Fire Department requirements. <i>(This measure is implemented through the Los Angeles County Fire Department review of the project design during the Subdivision Committee review process and conditions of approval, including fuel modification plan approval.)</i></p>	Applicant (Project Biologist)	Review of Wildfire Fuel Modification Plan	<ol style="list-style-type: none"> 1. LA County Forester 2. LA County Forester 3. Prior to Recordation of Final Subdivision Maps
<p>SP 4.6-53. If, at the time any subdivision map proposing construction is submitted, the County determines through an Initial Study, or otherwise, that there may be rare, threatened or endangered, plant or animal species on the property to be subdivided, then, in addition to the prior surveys conducted on the Specific Plan site to define the presence or absence of sensitive habitat and associated species, current, updated site-specific surveys for all such animal or plant species shall be conducted in accordance with the consultation requirements set forth in Mitigation Measure 4.6-59 within those areas of the Specific Plan where such animal or plant species occur or are likely to occur.</p>	Applicant (Project Biologist)	Review of Initial Study	<ol style="list-style-type: none"> 1. LACDRP
<p>The site-specific surveys shall include the unarmored three-spine stickleback, the arroyo toad, the Southwestern pond turtle, the California red-legged frog, the southwestern willow flycatcher, the least Bell's vireo, the San Fernando Valley spineflower and any other rare, sensitive, threatened, or endangered plant or animal species occurring, or likely to occur, on the property to be subdivided. All site-specific surveys shall be conducted during appropriate seasons by qualified botanists or qualified wildlife biologists in a manner that will locate any rare, sensitive, threatened, or endangered animal or plant species that may be present. To the extent there are applicable protocols published by either the United States Fish and Wildlife Service or the California Department of Fish and Game, all such protocols shall be followed in preparing the updated site-specific surveys.</p>			<ol style="list-style-type: none"> 2. LACDRP
<p>All site-specific survey work shall be documented in a separate report containing at least the following information: (a) project description, including a detailed map of the project location and study area; (b) a description of the biological setting, including references to the nomenclature used and updated vegetation mapping; (c) detailed description of survey methodologies; (d) dates of field surveys and total person-hours spent on the field surveys; (e) results of field surveys, including detailed maps and location data; (f) an assessment of potential impacts; (g) discussion of the significance of the rare, threatened or endangered animal or plant populations found in the project area, with consideration given to nearby populations and species distribution; (h) mitigation measures, including avoiding impacts altogether, minimizing or reducing impacts, rectifying or reducing impacts through habitat restoration, replacement or enhancement, or compensating for impacts by replacing or providing substitute resources or environments, consistent with</p>			<ol style="list-style-type: none"> 3. Prior to Approval of Subdivision Maps

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<p>California Environmental Quality Act (CEQA) Guidelines §15370); (i) references cited and persons contacted; and (j) other pertinent information, which is designed to disclose impacts and mitigate for such impacts. <i>(This measure is implemented through the Landmark Village mitigation measures LV4.4-3, LV4.4-5, LV4.4-8, LV4.4-9, LV4.4-16, LV4.4-17, LV4.4-19, LV4.4-20, LV4.4-22, LV4.4-23, LV4.4-24, LV4.4-25, LV4.4-52, and LV4.4-55.)</i></p>			
<p>SP 4.6-54. Prior to development within or disturbance to occupied Unarmored threespine stickleback habitat, a formal consultation with the USFWS shall occur. <i>(This measure was implemented through the Section 7 Consultation under the Federal Endangered Species and the issuance of the USFWS Biological Opinion during the processing of the 404 Permit by the USACE.)</i></p>	<p>Applicant (Project Biologist)</p>	<p>Section 7 Consultation</p>	<p>1. USFWS 2. USFWS 3. Prior to Grading</p>
<p>SP 4.6-55. Prior to development or disturbance within wetlands or other sensitive habitats, permits shall be obtained from pertinent federal and state agencies and the Specific Plan shall conform with the specific provisions of said permits. Performance criteria shall include that described in Mitigation Measures 4.6-1 through 4.6-16 and 4.6-42 through 4.6-47 for wetlands, and Mitigation Measures 4.6-27, 4.6-28, and 4.6-42 through 4.6-48 for other sensitive habitats. <i>(This measure was implemented through the issuance to the applicant of the CDFG 2081 Incidental Take Permit and the issuance of the 404 Permit by the USACE, incorporating the USFWS Biological Opinion.)</i></p>	<p>Applicant (Project Biologist)</p>	<p>Receipt of Appropriate Permit applications</p>	<p>1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Grading</p>
<p>SP 4.6-56. All lighting along the perimeter of natural areas shall be downcast luminaries with light patterns directed away from natural areas. <i>(This measure is implemented through the Los Angeles County Department of Regional Planning review of the project design during the Subdivision Committee review process and conditions of approval.)</i></p>	<p>Applicant</p>	<p>Building Permit Plot Plan Review</p>	<p>1. LACDRP 2. LACDRP 3. Prior to Issuance of Building Permits</p>
<p>SP 4.6-57. Where bridge construction is proposed and water flow would be diverted, blocking nets and seines shall be used to control and remove fish from the area of activity. All fish captured during this operation would be stored in tubs and returned unharmed back to the river after construction activities were complete. <i>(This measure is implemented through the Landmark Village mitigation measures LV4.4-10 through LV4.4-14, and LV4.4-54.)</i></p>	<p>Applicant (Project Biologist)</p>	<p>Field Verification</p>	<p>1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Construction</p>
<p>SP 4.6-58. To limit impacts to water quality the Specific Plan shall conform with all provisions of required NPDES permits and water quality permits that would be required by the California Regional Water Quality Control Board. <i>(This measure is implemented through the Landmark Village mitigation measures LV4.4-14 and the issuance of and compliance with the 401 certification by the Regional Water Quality Control Board.)</i></p>	<p>Project Engineer</p>	<p>Approval of a Storm Water Management Plan (SWMP)</p>	<p>1. LACDPW 2. LACDPW 3. Prior to Issuance of Grading Permit(s)</p>

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<p>SP 4.6-59. Consultation shall occur with the County of Los Angeles (County) and California Department of Fish and Game (CDFG) at each of the following milestones:</p> <p>1. Before Surveys. Prior to conducting sensitive plant or animal surveys at the Newhall Ranch subdivision map level, the applicant, or its designee, shall consult with the County and CDFG for purposes of establishing and/or confirming the appropriate survey methodology to be used;</p> <p>2. After Surveys. After completion of sensitive plant or animal surveys at the subdivision map level, draft survey results shall be made available to the County and CDFG within 60 calendar days after completion of the field survey work;</p>	Applicant (Project Biologist)	Section 2081 Permit	1. USFWS and CDFG
<p>3. Subdivision Map Submittal. Within 30 calendar days after the applicant, or its designee, submits its application to the County for processing of a subdivision map in the Mesas Village or Riverwood Village, a copy of the submittal shall be provided to CDFG. In addition, the applicant, or its designee, shall schedule a consultation meeting with the County and CDFG for purposes of obtaining comments and input on the proposed subdivision map submittal. The consultation meeting shall take place at least thirty (30) days prior to the submittal of the proposed subdivision map to the County; and</p>			2. USFWS and CDFG
<p>4. Development/Disturbance and Further Mitigation. Prior to any development within, or disturbance to, habitat occupied by rare, threatened, or endangered plant or animal species, or to any portion of the Spineflower Mitigation Area Overlay, as defined below, all required permits shall be obtained from both USFWS and CDFG, as applicable. It is further anticipated that the federal and state permits will impose conditions and mitigation measures required by federal and state law that are beyond those identified in the Newhall Ranch Final EIR (March 1999), the Newhall Ranch DAA (April 2001) and the Newhall Ranch Revised DAA (2002). It is also anticipated that conditions and mitigation measures required by federal and state law for project-related impacts on endangered, rare or threatened species and their habitat will likely require changes and revisions to Specific Plan development footprints, roadway alignments, and the limits, patterns and techniques associated with project-specific grading at the subdivision map level. <i>(This measure will be implemented through the compliance by the applicant with the CDFG 2081 Incidental Take Permit.)</i></p>			3. Prior to Grading
<p>SP 4.6-60 If at the time subdivisions permitting construction are processed, the County determines through an Initial Study that there may be elderberry scrub vegetation on the property being subdivided, then a site-specific survey shall be conducted to define the presence or absence of such habitat and any necessary mitigation measures shall be determined and applied. <i>(This measure is not applicable to Landmark Village because the project would not impact elderberry scrub.)</i></p>			

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<p>SP 4.6-61 If at the time subdivisions permitting construction are processed, the County determines through an Initial Study that there may be mainland cherry trees and/or mainland cherry shrubs on the property being subdivided, then a site-specific survey shall be conducted to define the presence or absence of such habitat and any necessary mitigation measures shall be determined and applied. (This measure is not applicable to Landmark Village because the project would not impact cherry trees.)</p>			
<p>SP 4.6-62 When a map revision or Substantial Conformance determination on any subdivision map or Conditional Use Permit would result in changes to an approved oak tree permit, then the oak tree report for that oak tree permit must be amended for the area of change, and the addendum must be approved by the County Forester prior to issuance of grading permits for the area of the map or CUP being changed. (This measure is not applicable to the Landmark Village project because the project does not propose any change to an existing oak tree permit.)</p>			
<p>SP 4.6-63. Riparian resources that are impacted by buildout of the Newhall Ranch Specific Plan shall be restored with similar habitat at the rate of 1 acre replaced for each acre lost. <i>(This measure has been addressed by project-specific mitigation measure LV 4.4-1.)</i></p>	<p>Applicant (Project Biologist)</p>	<p>ACOE 404 Permit</p>	<p>1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Issuance of Building Permits</p>
<p>SP 4.6-64 The operator of the golf course shall prepare a Golf Course Maintenance Plan which shall include procedures to control storm water quality and ground water quality as a result of golf course maintenance practices, including irrigation, fertilizer, pesticide and herbicide use. This Plan shall be prepared in coordination with the County biologist and approved by the County Planning Director prior to the issuance of a Certificate of Occupancy. (This measure is not applicable to the Landmark Village project because the project does not include construction and operation of a golf course.)</p>			
<p>SP 4.6-65 In order to facilitate the conservation of the spineflower on the Newhall Ranch Specific Plan site, the applicant, or its designee, shall, concurrent with Specific Plan approval, agree to the identified special study areas shown in Figure 2.6-8, Spineflower Mitigation Area Overlay. The applicant, or its designee, further acknowledges that, within and around the Spineflower Mitigation Area Overlay (Figure 2.6-8), changes will likely occur to Specific Plan development footprints, roadway alignments, and the limits, patterns and techniques associated with project-specific grading at the subdivision map level. The applicant, or its designee, shall design subdivision maps that are responsive to the characteristics of the spineflower and all other Endangered plant species that may be found on the Specific Plan site. (Not applicable.)</p>			

SP 4.6-66 Direct impacts to known spineflower populations within the Newhall Ranch Specific Plan area shall be avoided or minimized through the establishment of one or more on-site preserves that are configured to ensure the continued existence of the species in perpetuity. Preserve(s) shall be delineated in consultation with the County and CDFG, and will likely require changes and revisions to Specific Plan development footprints for lands within and around the Spineflower Mitigation Area Overlay (Figure 2.6-8). Delineation of the boundaries of Newhall Ranch spineflower preserve(s) for the entire Specific Plan area shall be completed in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesas Village, or that portion of Riverwood Village in which the San Martinez spineflower population occurs.

A sufficient number of known spineflower populations shall be included within the Newhall Ranch spineflower preserve(s) in order to ensure the continued existence of the species in perpetuity. The conservation of known spineflower populations shall be established in consultation with the County and CDFG, and as consistent with standards governing issuance of an incidental take permit for spineflower pursuant to Fish and Game Code Section 2081, subdivision (b).

In addition to conservation of known populations, spineflower shall be introduced in appropriate habitat and soils in the Newhall Ranch preserve(s). The creation of introduced populations shall require seed collection and/or top soil at impacted spineflower locations and nursery propagation to increase seed and sowing of seed. The seed collection activities, and the maintenance of the bulk seed repository, shall be approved in advance by the County and CDFG.

Once the boundaries of the Newhall Ranch spineflower preserve(s) are delineated, the project applicant, or its designee, shall be responsible for conducting a spineflower population census within the Newhall Ranch spineflower preserve(s) annually for 10 years. (These census surveys shall be in addition to the surveys required by Mitigation Measure SP 4.6-53, above.) The yearly spineflower population census documentation shall be submitted to the County and CDFG, and maintained by the project applicant, or its designee. If there are any persistent population declines documented in the annual population census reports, the project applicant, or its designee, shall be responsible for conducting an assessment of the ecological factor(s) that are likely responsible for the decline, and implement management activity or activities to address these factors where feasible. In no event, however, shall project-related activities jeopardize the continued existence of the Newhall Ranch spineflower populations.

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<p>If a persistent population decline is documented, such as a trend in steady population decline that persists for a period of 5 consecutive years, or a substantial drop in population is detected over a 10-year period, spineflower may be introduced in consultation with CDFG in appropriate habitat and soils in the Newhall Ranch preserve(s), utilizing the bulk spineflower seed repository, together with other required management activity or activities. These activities shall be undertaken by a qualified botanist/biologist, subject to approval by the County and CDFG. The project applicant, or its designee, shall be responsible for the funding and implementation of the necessary management activity or activities, including monitoring, as approved by the County and CDFG. Annual viability reports shall be submitted to the County and CDFG for 10 years following delineation of the Newhall Ranch spineflower preserve(s) to ensure long-term documentation of the spineflower population status within the Newhall Ranch preserve(s). In the event annual status reports indicate the spineflower population within the Newhall Ranch preserve(s) is not stable and viable 10 years following delineation of the spineflower preserve(s), the project applicant, or its designee, shall continue to submit annual status reports to the County and CDFG for a period of no less than an additional 5 years. (Not applicable.)</p>			
<p>SP 4.6-67. Indirect impacts associated with the interface between the preserved spineflower populations and planned development within the Newhall Ranch Specific Plan shall be avoided or minimized by establishing open space connections with Open Area, River Corridor, or High Country land use designations. In addition, buffers (i.e., setbacks from developed, landscaped, or other use areas) shall be established around portions of the delineated preserve(s) not connected to Open Area, the River Corridor or the High Country land use designations. The open space connections and buffer configurations shall take into account local hydrology, soils, existing and proposed adjacent land uses, the presence of non-native invasive plant species, and seed dispersal vectors. Open space connections shall be configured such that the spineflower preserves are connected to Open Area, River Corridor, or High Country land use designations to the extent practicable. Open space connections shall be of adequate size and configuration to achieve a moderate to high likelihood of effectiveness in avoiding or minimizing indirect impacts (e.g., invasive plants, increased fire frequency, trampling, chemicals, etc.) to the spineflower preserve(s). Open space connections for the spineflower preserve(s) shall be configured in consultation with the County and CDFG. Open space connections for the spineflower preserve(s) shall be established for the entire Specific Plan area in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesa Village, or that portion of the Riverwood Village in which the San Martinez spineflower location occurs.</p>	<p>Applicant</p>	<p>Review of Initial Study and Subdivision</p>	<p>1. LACDRP/CDFG</p>

8.0 Mitigation ~~Monitoring Plan~~

<p>For preserves and/or those portions of preserves not connected to Open Area, River Corridor, or High Country land use designations, buffers shall be established at variable distances of between 80 and 200 feet from the edge of development to achieve a moderate to high likelihood of effectiveness in avoiding or minimizing indirect impacts (e.g., invasive plants, increased fire frequency, trampling, chemicals, etc.) to the spineflower preserve(s). The buffer size/configuration shall be guided by the analysis set forth in the "Review of Potential Edge Effects on the San Fernando Valley Spineflower," prepared by Conservation Biology Institute, January 19, 2000, and other sources of scientific information and analysis, which are available at the time the preserve(s) and buffers are established. Buffers for the spineflower preserve(s) shall be configured in consultation with the County and CDFG for the entire Specific Plan area. Buffers for the spineflower preserve(s) shall be established in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesa Village, or that portion of the Riverwood Village in which the San Martinez spineflower location occurs.</p>			<p>2. LACDRP/CDFG</p>
<p>Roadways and road rights-of-way shall not be constructed in any spineflower preserve(s) and buffer locations on Newhall Ranch unless constructing the road(s) in such location is found to be the environmentally superior alternative in subsequently required tiered EIRs in connection with the Newhall Ranch subdivision map(s) process. No other development or disturbance of native habitat shall be allowed within the spineflower preserve(s) or buffer(s). The project applicant, or its designee, shall be responsible for revegetating open space connections and buffer areas of the Newhall Ranch spineflower preserve(s) to mitigate temporary impacts due to grading that will occur within portions of those open space connections and buffer areas.</p>			<p>3. Prior to Approval of Subdivision Maps</p>
<p>The impacted areas shall be reseeded with a native seed mix to prevent erosion, reduce the potential for invasive non-native plants, and maintain functioning habitat areas within the buffer area. Revegetation seed mix shall be reviewed and approved by the County and CDFG. (This measure is implemented by the Landmark Village mitigation measure LV4.4-1 although the project would not impact a spineflower preserve area.)</p>			

<p>SP 4.6-68 To protect the preserved Newhall Ranch spineflower populations, and to further reduce potential direct impacts to such populations due to unrestricted access, the project applicant, or its designee, shall erect and maintain temporary orange fencing and prohibitive signage around the Newhall Ranch preserve(s), open space connections and buffer areas, which are adjacent to areas impacted by proposed development prior to and during all phases of construction. The areas behind the temporary fencing shall not be used for the storage of any equipment, materials, construction debris, or anything associated with construction activities.</p> <p>Following the final phase of construction of any Newhall Ranch subdivision map adjacent to the Newhall Ranch spineflower preserve(s), the project applicant, or its designee, shall install and maintain permanent fencing along the subdivision tract bordering the preserve(s). Permanent signage shall be installed on the fencing along the preservation boundary to indicate that the fenced area is a biological preserve, which contains protected species and habitat, that access is restricted, and that trespassing and fuel modification are prohibited within the area. The permanent fencing shall be designed to allow wildlife movement.</p> <p>The plans and specifications for the permanent fencing and signage shall be approved by the County and CDFG prior to the final phase of construction of any Newhall Ranch subdivision map adjacent to a Newhall Ranch spineflower preserve(s). (Not applicable.)</p>			
<p>SP 4.6-69 Indirect impacts resulting from changes to hydrology (i.e., increased water runoff from surrounding development) at the interface between spineflower preserve(s) and planned development within the Newhall Ranch Specific Plan shall be avoided or mitigated to below a level of significance.</p> <p>Achievement of this standard will be met through the documented demonstration by the project applicant, or its designee, that the storm drain system achieves pre-development hydrological conditions for the Newhall Ranch spineflower preserve(s). To document such a condition, the project applicant, or its designee, shall prepare a study of the pre- and post-development hydrology, in conjunction with Newhall Ranch subdivision maps adjacent to spineflower preserve(s). The study shall be used in the design and engineering of a storm drain system that achieves pre-development hydrological conditions. The study must conclude that proposed grade changes in development areas beyond the buffers will maintain pre-development hydrology conditions within the preserve(s). The study shall be approved by the Planning Director of the County, and the resulting conditions confirmed by CDFG.</p> <p>The storm drain system for Newhall Ranch subdivision maps adjacent to any spineflower preserves must be approved by the County prior to the initiation of any grading activities. (Not applicable.)</p>			

<p>SP 4.6-70 Consistent with the Spineflower Mitigation Area Overlay reflected in Mitigation Measure SP 4.6-65, direct impacts to known Newhall Ranch spineflower populations associated with proposed road construction or modifications to existing roadways shall be further assessed for proposed road construction at the Newhall Ranch subdivision map level, in conjunction with the tiered EIR required for each subdivision map. To avoid or substantially lessen direct impacts to known spineflower populations, Specific Plan roadways shall be redesigned or realigned, to the extent practicable, to achieve the spineflower preserve and connectivity/preserve design/buffer standards set forth in Mitigation Measures SP 4.6-66 and SP 4.6-67. The project applicant, or its designee, acknowledges that that road redesign and realignment is a feasible means to avoid or substantially lessen potentially significant impacts on the now known Newhall Ranch spineflower populations. Road redesign or alignments to be considered at the subdivision map level include</p> <ul style="list-style-type: none"> (a) Commerce Center Drive; (b) Magic Mountain Parkway; (c) Chiquito Canyon Road; (d) Long Canyon Road; (e) San Martinez Grande Road; (f) Potrero Valley Road; (g) Valencia Boulevard; and (h) Any other or additional roadways that have the potential to significantly impact known Newhall Ranch spineflower populations. <p>Roadways and road rights-of-way shall not be constructed in any spineflower preserve(s) and buffer locations on Newhall Ranch, unless constructing the road(s) in such location is found to be the environmentally superior alternative in subsequently required tiered EIRs in connection with the Newhall Ranch subdivision map(s) process. (Not applicable.)</p>			
<p>SP 4.6-71 Consistent with the Spineflower Mitigation Area Overlay reflected in Mitigation Measure SP 4.6-65, direct impacts to known Newhall Ranch spineflower populations shall be further assessed at the Newhall Ranch subdivision map level, in conjunction with the required tiered EIR process. To avoid or substantially lessen impacts to known spineflower populations at the subdivision map level, the project applicant, or its designee, may be required to adjust Specific Plan development footprints, roadway alignments, and the limits, patterns and techniques associated with project-specific grading to achieve the spineflower preserve and connectivity/preserve design/buffer standards set forth in Mitigation Measures SP 4.6-66 and SP 4.6-67 for all future Newhall Ranch subdivision maps that encompass identified spineflower populations. (Not applicable.)</p>			

<p>SP 4.6-72 A Fire Management Plan shall be developed to avoid and minimize direct and indirect impacts to the spineflower, in accordance with the adopted Newhall Ranch Resource Management Plan (RMP), to protect and manage the Newhall Ranch spineflower preserve(s) and buffers.</p> <p>The Fire Management Plan shall be completed by the project applicant, or its designee, in conjunction with approval of any Newhall Ranch subdivision map adjacent to a spineflower preserve.</p> <p>The final Fire Management Plan shall be approved by the County of Los Angeles Fire Department through the processing of subdivision maps.</p> <p>Under the final Fire Management Plan, limited fuel modification activities within the spineflower preserves will be restricted to selective thinning with hand tools to allow the maximum preservation of Newhall Ranch spineflower populations. No other fuel modification or clearance activities shall be allowed in the Newhall Ranch spineflower preserve(s). Controlled burning may be allowed in the future within the Newhall Ranch spineflower preserve(s) and buffers, provided that it is based upon a burn plan approved by the County of Los Angeles Fire Department and CDFG. The project applicant, or its designee, shall also be responsible for annual maintenance of fuel modification zones, including, but not limited to, removal of undesirable non-native plants, revegetation with acceptable locally indigenous plants and clearing of trash and other debris in accordance with the County of Los Angeles Fire Department. (Not applicable.)</p>			
<p>SP 4.6-73 At the subdivision map level, the project applicant, or its designee, shall design and implement project-specific design measures to minimize changes in surface water flows to the Newhall Ranch spineflower preserve(s) for all Newhall Ranch subdivision maps adjacent to the preserve(s) and buffers, and avoid and minimize indirect impacts to the spineflower. Prior to issuance of a grading permit for each such subdivision map, the project applicant, or its designee, shall submit for approval to the County plans and specifications that ensure implementation of the following design measures:</p> <p>(1) During construction activities, drainage ditches, piping or other approaches will be put in place to convey excess storm water and other surface water flows away from the Newhall Ranch spineflower preserve(s) and connectivity/preserve design/buffers, identified in Mitigation Measures SP 4.6-66 and SP 4.6-67;</p> <p>(2) Final grading and drainage design will be developed that does not change the current surface and subsurface hydrological conditions within the preserve(s);</p> <p>(3) French drains will be installed along the edge of any roadways and fill slopes that drain toward the preserve(s);</p> <p>(4) Roadways will be constructed with slopes that convey water flows within the roadway easements and away from the preserve(s);</p>			

<p>(5) Where manufactured slopes drain toward the preserve(s), a temporary irrigation system would be installed to the satisfaction of the County in order to establish the vegetation on the slope area(s). This system shall continue only until the slope vegetation is established and self sustaining;</p> <p>(6) Underground utilities will not be located within or through the preserve(s). Drainage pipes installed within the preserve(s) away from spineflower populations to convey surface or subsurface water away from the populations will be aligned to avoid the preserve(s) to the maximum extent practicable; and</p> <p>(7) Fencing or other structural type barriers that will be installed to reduce intrusion of people or domestic animals into the preserve(s) shall incorporate footing designs that minimize moisture collection.</p> <p>(Not applicable.)</p>			
<p>SP 4.6-74 A knowledgeable, experienced botanist/biologist, subject to approval by the County and CDFG, shall be required to monitor the grading and fence/utility installation activities that involve earth movement adjacent to the Newhall Ranch spineflower preserve(s) to avoid the incidental take through direct impacts of conserved plant species, and to avoid disturbance of the preserve(s). The biological monitor will conduct biweekly inspections of the project site during such grading activities to ensure that the mitigation measures provided in the adopted Newhall Ranch Mitigation Monitoring Program (Biota section) are implemented and adhered to.</p> <p>Monthly monitoring reports, as needed, shall be submitted to the County verifying compliance with the mitigation measures specified in the adopted Newhall Ranch Mitigation Monitoring Program (Biota section).</p> <p>The biological monitor will have authority to immediately stop any such grading activity that is not in compliance with the adopted Newhall Ranch Mitigation Monitoring Program (Biota section), and to take reasonable steps to avoid the take of, and minimize the disturbance to, spineflower populations within the preserve(s). (Not applicable.)</p>			

<p>SP 4.6-75 The following measures shall be implemented to avoid and minimize indirect impacts to Newhall Ranch spineflower populations during all phases of project construction:</p> <p>(1) Water Control. Watering of the grading areas would be controlled to prevent discharge of construction water into the Newhall Ranch preserve(s) or on ground sloping toward the preserve(s). Prior to the initiation of grading operations, the project applicant, or its designee, shall submit for approval to the County an irrigation plan describing watering control procedures necessary to prevent discharge of construction water into the Newhall Ranch preserve(s) and on ground sloping toward the preserve(s).</p> <p>(2) Storm Water Flow Redirection. Diversion ditches would be constructed to redirect storm water flows from graded areas away from the Newhall Ranch preserve(s). To the extent practicable, grading of areas adjacent to the preserve(s) would be limited to spring and summer months (May through September) when the probability of rainfall is lower. Prior to the initiation of grading operations, the project applicant, or its designee, would submit for approval to the County a storm water flow redirection plan that demonstrates the flow of storm water away from the Newhall Ranch spineflower preserve(s).</p>			
<p>(3) Treatment of Exposed Graded Slopes. Graded slope areas would be trimmed and finished as grading proceeds. Slopes would be treated with soil stabilization measures to minimize erosion. Such measures may include seeding and planting, mulching, use of geotextiles and use of stabilization mats. Prior to the initiation of grading operations, the project applicant, or its designee, would submit for approval to the County the treatments to be applied to exposed graded slopes that would ensure minimization of erosion. (This measure has been omitted because the project design directly incorporates these measures.)</p>			
<p>SP 4.6-76 In conjunction with submission of the first Newhall Ranch subdivision map in either Mesas Village or that portion of Riverwood Village in which the San Martinez spineflower location occurs, the project applicant, or its designee, shall reassess project impacts, both direct and indirect, to the spineflower populations using subdivision mapping data, baseline data from the Newhall Ranch Final EIR and data from the updated plant surveys (see, Specific Plan EIR Mitigation Measure SP 4.6-53).</p> <p>This reassessment shall take place during preparation of the required tiered EIR for each subdivision map. If the reassessment results in the identification of new or additional impacts to Newhall Ranch spineflower populations, which were not previously known or identified, the mitigation measures set forth in this program, or a Fish and Game Code Section 2081 permit(s) issued by CDFG, shall be required, along with any additional mitigation required at that time. (Not applicable.)</p>			

<p>SP 4.6-77 Direct and indirect impacts to the preserved Newhall Ranch spineflower populations shall require a monitoring and management plan, subject to the approval of the County. The applicant shall consult with CDFG with respect to preparation of the Newhall Ranch spineflower monitoring/management plan. This plan shall be in place when the preserve(s) and connectivity/preserve design/buffers are established (see Mitigation Measures SP 4.6-66 and SP 4.6-67). The criteria set forth below shall be included in the plan.</p> <p>Monitoring. The purpose of the monitoring component of the plan is to track the viability of the Newhall Ranch spineflower preserve(s) and its populations, and to ensure compliance with the adopted Newhall Ranch Mitigation Monitoring Program (Biota section).</p> <p>The monitoring component of the plan shall investigate and monitor factors such as population size, growth or decline, general condition, new impacts, changes in associated vegetation species, pollinators, seed dispersal vectors, and seasonal responses. Necessary management measures will be identified. The report results will be sent annually to the County, along with photo documentation of the assessed site conditions.</p>			
<p>The project applicant, or its designee, shall contract with a qualified botanist/biologist, approved by the County, with the concurrence of CDFG, to conduct quantitative monitoring over the life of the Newhall Ranch Specific Plan. The botanist/biologist shall have a minimum of three years experience with established monitoring techniques and familiarity with southern California flora and target taxa. Field surveys of the Newhall Ranch spineflower preserve(s) will be conducted each spring. Information to be obtained will include (a) an estimate of the numbers of spineflowers in each population within the preserve(s); (b) a map of the extent of occupied habitat at each population; (c) establishment of photo monitoring points to aid in documenting long-term trends in habitat; (d) aerial photographs of the preserved areas at five-year intervals; (e) identification of significant impacts that may have occurred or problems that need attention, including invasive plant problems, weed problems and fencing or signage repair; and (f) overall compliance with the adopted mitigation measures.</p>			

For a period of three years from Specific Plan re-approval, all areas of potential habitat on the Newhall Ranch site will be surveyed annually in the spring with the goal of identifying previously unrecorded spineflower populations. Because population size and distribution limits are known to vary depending on rainfall, annual surveys shall be conducted for those areas proposed for development in order to establish a database appropriate for analysis at the project-specific subdivision map level (rather than waiting to survey immediately prior to proceeding with the project-specific subdivision map process). In this way, survey results gathered over time (across years of varying rainfall) will provide information on ranges in population size and occupation. New populations, if they are found, will be mapped and assessed for inclusion in the preserve program to avoid impacts to the species.

Management. Based on the outcome of ongoing monitoring and additional project-specific surveys addressing the status and habitat requirements of the spineflower, active management of the Newhall Ranch spineflower preserve(s) will be required in perpetuity. Active management activities will be triggered by a downward population decline over 5 consecutive years, or a substantial drop in population over a 10-year period following County re-approval of the Specific Plan. Examples of management issues that may need to be addressed in the future include, but are not limited to, control of exotic competitive non native plant species, herbivory predation, weed control, periodic controlled burns, or fuel modification compliance.

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8.0 Mitigation Monitoring Plan

<p>After any population decline documented in the annual populations census following County re-approval of the Specific Plan, the project applicant, or its designee, shall be responsible for conducting an assessment of the ecological factor(s) that are likely responsible for the decline, and implement management activity or activities to address these factors where feasible. If a persistent population decline is documented, such as a trend in steady population decline persistent for a period of 5 consecutive years, or a substantial drop in population detected over a 10-year period, spineflower may be introduced in appropriate habitat and soils in the Newhall Ranch preserve(s), utilizing the bulk spineflower seed repository, together with other required management activity or activities. In connection with this monitoring component, the project applicant, or its designee, shall contract with a qualified botanist/biologist, approved by the County, to complete (a) a study of the breeding and pollination biology of the spineflower, including investigation into seed physiology to assess parameters that may be important as management tools to guarantee self-sustainability of populations, which may otherwise have limited opportunity for germination; and (b) a population genetics study to document the genetic diversity of the Newhall Ranch spineflower population. The criteria for these studies shall be to develop data to make the Newhall Ranch spineflower management program as effective as possible. These studies shall be subject to approval by the County's biologist, with the concurrence of CDFG. These activities shall be undertaken by a qualified botanist/biologist, subject to approval by the County with the concurrence of CDFG. The project applicant, or its designee, shall be responsible for the funding and implementation of the necessary management activity or activities, as approved by the County and CDFG.</p>			
<p>The length of the active management components set forth above shall be governed by attainment of successful management criteria set forth in the plan rather than by a set number of years. (Not applicable.)</p>			

<p>SP 4.6-78 To the extent project-related direct and indirect significant impacts on spineflower cannot be avoided or substantially lessened through establishment of the Newhall Ranch spineflower preserve(s), and other avoidance, minimization, or other compensatory mitigation measures, a translocation and reintroduction program may be implemented in consultation with CDFG to further mitigate such impacts. Direct impacts (i.e., take) to occupied spineflower areas shall be fully mitigated at a 4:1 ratio. Impacts to occupied spineflower areas caused by significant indirect effects shall be mitigated at a 1:1 ratio.</p> <p>Introduction of new spineflower areas will be achieved through a combination of direct seeding and translocation of the existing soil seed bank that would be impacted by grading. Prior to any development within, or disturbance to, spineflower populations, on-site and off-site mitigation areas shall be identified and seed and top soil shall be collected. One-third of the collected seed shall be sent to the Rancho Santa Ana Botanical Garden for storage. One third of the seed shall be sent to the USDA National Seed Storage Lab in Fort Collins, Colorado for storage. One third shall be used for direct seeding of the on-site and off-site mitigation areas.</p>			
<p>Direct seeding. Prior to the initiation of grading, the project applicant, or its designee, shall submit to the County a program for the reintroduction of spineflower on Newhall Ranch. The reintroduction program shall include, among other information: (a) location map with scale; (b) size of each introduction polygon; (c) plans and specifications for site preparation, including selective clearing of competing vegetation; (d) site characteristics; (e) protocol for seed collection and application; and (f) monitoring and reporting. The program shall be submitted to CDFG for input and coordination. The project applicant, or its designee, shall implement the reintroduction program prior to the initiation of grading. At least two candidate spineflower reintroduction areas will be created within Newhall Ranch and one candidate spineflower reintroduction area will be identified off site. Both on-site and off-site reintroduction areas will be suitable for the spineflower in both plant community and soils, and be located within the historic range of the taxon. Success criteria shall be included in the monitoring/management plan, with criteria for the germination, growth, and production of viable seeds of individual plants for a specified period.</p> <p>Although the reintroduction program is experimental at this stage, the County considers such a program to be a feasible form of mitigation at this juncture based upon available studies. Botanists/biologists familiar with the ecology and biology of the spineflower would prepare and oversee the reintroduction program.</p>			

<p>Translocation. Prior to the initiation of grading, the project applicant, or its designee, shall submit to the County a translocation program for the spineflower. Translocation would salvage the topsoil of spineflower areas to be impacted due to grading. Salvaged spineflower soil seed bank would be translocated to the candidate spineflower reintroduction areas. The translocation program shall include, among other information: (a) location map with scale; (b) size of each translocation polygon; (c) plans and specifications for site preparation, including selective clearing of competing vegetation; (d) site characteristics; (e) protocol for topsoil collection and application; and (f) monitoring and reporting. The translocation program shall be submitted to CDFG for input and coordination. Translocation shall occur within the candidate spineflower reintroduction areas on site and off site. Successful criteria for each site shall be included in the monitoring/management plan/with criteria for the germination and growth to reproduction of individual plants for the first year a specified period.</p> <p>Although the translocation program is experimental at this stage, the County considers such a program to be a feasible form of mitigation at this juncture based upon available studies. Botanists/biologists familiar with the ecology and biology of the spineflower would prepare and oversee the translocation program. (Not applicable.)</p>			
<p>SP 4.6-79 The project applicant, or its designee, shall engage in regular and ongoing consultation with the County and CDFG in connection with its ongoing agricultural operations in order to avoid or minimize significant direct impacts to the spineflower.</p> <p>In addition, the project applicant, or its designee, shall provide 30 days advance written notice to the County and CDFG of the proposed conversion of its ongoing rangeland operations on Newhall Ranch to more intensive agricultural uses. The purpose of the advance notice requirement is to allow the applicant, or its designee, to coordinate with the County and CDFG to avoid or minimize significant impacts to the spineflower prior to the applicant's proposed conversion of its ongoing rangeland operations to more intensive agricultural uses. This coordination component will be implemented by or through the County's Department of Regional Planning and/or the Regional Manager of CDFG. Implementation will consist of the County and/or CDFG conducting a site visit of the proposed conversion area(s) within the 30-day period, and making a determination of whether the proposed conversion area(s) would destroy or significantly impact spineflower population in or adjacent to those areas. If it is determined that the conversion area(s) do not destroy or significantly impact spineflower populations, then the County and/or CDFG will authorize such conversion activities in the proposed conversion area(s).</p>			

8.0 Mitigation Monitoring Plan

<p>However, if it is determined that the conversion area(s) may destroy or significantly impact spineflower populations, then the County and/or CDFG will issue a stop work order to the applicant, or its designee. If such an order is issued, the applicant, or its designee, shall not proceed with any conversion activities in the proposed conversion area(s). However, the applicant, or the designee, may take steps to relocate the proposed conversion activities in an alternate conversion area(s). In doing so, the applicant, or its designee, shall follow the same notice and coordination provisions identified above. This conversion shall not include ordinary pasture maintenance and renovation or dry land farming operations consistent with rangeland management. <i>(This measure is not applicable to the Landmark Village project because the project does not include an agricultural component.)</i></p>			
<p>SP 4.6-80 Upon approval of tentative tract map(s) impacting the San Martinez portion of the Specific Plan site, the applicant shall work with the Department of Regional Planning staff and SEATAC to establish an appropriately sized preserve area to protect the spineflower population at San Martinez Canyon. <i>(This measure is not applicable to the Landmark Village project because the project is not proposed within the San Martinez portion of the Newhall Ranch Specific Plan.)</i></p>			
<p>LV 4.4-1. Mitigation Measures SP 4.6-1 through SP 4.6-16 specify requirements for riparian mitigation conducted in the High Country SMA/SEA 20, Salt Creek area, and Open Area. The applicant will prepare and implement a plan for mitigation of both riparian and upland habitats (such as riparian adjacent big sagebrush scrub), and incorporates these Mitigation Measures (SP 4.6-1 through SP 4.6-16). A Comprehensive Mitigation Implementation Plan (CMIP) has been developed by Newhall Land that provides an outline of mitigation to offset impacts. The CMIP demonstrates the feasibility of creating the required mitigation acreage to offset project impacts (see LV 4.4-29). <u>However, the CMIP does not identify mitigation actions specific to impacts on waters of the United States. But since these waters are a subset of CDFG jurisdiction, the necessary Corps mitigation requirements would be met or exceeded.</u> Detailed riparian/wetlands mitigation plans, in accordance with the CMIP, shall be submitted to, and are subject to the approval of, the Corps and CDFG as part of the sub-notification letters for individual projects. Individual project submittals shall include applicable CMIP elements, complying with the requirements outlined below. The detailed wetlands mitigation plan shall specify, at a minimum, the following:</p>	<p>Applicant (Project Biologist)</p>	<p>Wetland Mitigation Plans and Upland Habitat Mitigation Plans</p>	<p>1. ACOE, CDFG, LACDRP</p>

(1) the location of mitigation sites; (2) site preparation, including grading, soils preparation, irrigation installation, (2a) the quantity (seed or nursery stock) and species of plants to be planted (all species to be native to region); (3) detailed procedures for creating additional vegetation communities; (4) methods for the removal of non-native plants; (5) a schedule and action plan to maintain and monitor the enhancement/restoration area; (6) a list of criteria by which to measure success of the mitigation sites (e.g., percent cover and richness of native species, percent survivorship, establishment of self-sustaining native plantings, maximum allowable percent of non-native species); (7) measures to exclude unauthorized entry into the creation/enhancement areas; and (8) contingency measures in the event that mitigation efforts are not successful. The Individual project detailed wetlands mitigation plans shall also classify the biological value (as "high," "moderate," or "low") of the vegetation communities to be disturbed as defined in these conditions, or may be based on an agency-approved

method (e.g., Hybrid Assessment of Riparian Communities (HARC)). The biological value shall be used to determine mitigation replacement ratios required under LV 4.4-29 and LV 4.4-37. The detailed wetlands mitigation plans shall provide for the 3:1 replacement of any Southern California black walnut to be removed from the riparian corridor for individual projects. The plan shall be subject to the approval of ~~the~~ CDFG and the Corps and approved prior to the impact to riparian resources. LV 4.4-31 describes that the functions and values will be assessed for the riparian areas that will be removed, and LV 4.4-29 and LV 4.4-37 describe the replacement ratios for the habitats that will be impacted.

LV 4.4-2. Approximately 155.7 acres of coastal scrub shall be preserved on site within Open Area and/or off-site within the High Country SMA, the Salt Creek area, or the River Corridor SMA within the Specific Plan area to offset impacts associated with Landmark Village. ~~The functional values of any burned dedicated land areas shall be evaluated annually until such time that conditions are commensurate with the quality of the impacted habitat being mitigated. In the event that the functional value of this burned habitat has not recovered within five years of the dedication due to invasive species, to fire ecology, erosion, drought, or unforeseen events, then adaptive management pursuant to LV 4.4-59 will be implemented for coastal scrub restoration. This measure ensures that preserved areas will be part of a greater managed preserved system of numerous natural vegetation communities meant to support both common and special-status wildlife species. These areas support the same types of habitat that would be lost through construction and would be further enhanced through management and monitoring activities.~~

8.0 Mitigation Monitoring Plan

			2. ACOE, CDFG, LACDRP
			3. Concurrent with Submittal of Sub-Notification Letters
Applicant (Project Biologist)	Submit Offer to Dedicate	1. LACDRP	
		2. LACDRP	
		3. Prior to Issuance of Grading Permits	

8.0 Mitigation Monitoring Plan			
<p>LV 4.4-3. Focused surveys for the undescribed species of everlasting (a special-status plant species) shall be conducted by a qualified botanist prior to the commencement of grading/construction activities wherever suitable habitat (primarily river terraces) could be affected by direct, indirect, or secondary construction impacts. The surveys shall be conducted no more than one year prior to commencement of construction activities within suitable habitat, and the surveys shall be conducted at a time of year when the plants can be located and identified. Should the species be documented within the Project boundary, avoidance measures shall be implemented to minimize impacts to individual plants wherever feasible. These measures shall include minor adjustments to the boundaries/location of haul routes and other Project features. If, due to Project design constraints, avoidance of all plants is not possible, then further measures, described in LV 4.4-4, shall be implemented to salvage seeds and/or transplant individual plants. All seed collection and/or transplantation methods, as well as the location of the receptor site for seeds/plants (assumed to be within preserved open space areas of Newhall Ranch along the Santa Clara River), shall be coordinated with CDFG prior to impacting known occurrences of the undescribed everlasting.</p>	Applicant (Project Biologist)	Review of Everlasting Plant Surveys	<ol style="list-style-type: none"> 1. LACDRP/CDFG 2. LACDRP/CDFG 3. Prior to Commencement of Grading/Construction Activities
<p>LV 4.4-4. For any individual project, or any phase of an individual project, to be located where undescribed everlasting plants may occur , the applicant shall prepare and implement an Undescribed Everlasting Mitigation and Monitoring Plan prior to the issuance of grading permits.</p>	Applicant (Project Biologist)	Review and Approval of an Undescribed Everlasting Mitigation and Monitoring Plan	<ol style="list-style-type: none"> 1. LACDRP/CDFG
<p>The Plan shall provide for replacement of individual plants to be removed at a minimum 1:1 ratio, within suitable habitat at a site where no future construction-related disturbance will occur. The plan shall specify the following: (1) the location of the mitigation site in protected/preserved areas within the Specific Plan site; (2) methods for harvesting seeds or salvaging and transplantation of individual plants to be impacted; (3) measures for propagating plants (from seed or cuttings) or transferring living specimens from the salvage site to the introduction site; (4) site preparation procedures for the mitigation site; (5) a schedule and action plan to maintain and monitor the mitigation area; (6) the list of criteria and performance standards by which to measure the success of the mitigation site (below); (7) measures to exclude unauthorized entry into the mitigation areas; and (8) contingency measures such as erosion control, replanting, or weeding to implement in the event that mitigation efforts are not successful.</p>			<ol style="list-style-type: none"> 2. LACDRP/CDFG

The performance standards for the Undescribed Everlasting Mitigation and Monitoring Plan shall be the following: a. Within four years after reintroducing the undescribed everlasting to the mitigation site, the extent of occupied acreage and the number of established, reproductive plants will be no smaller than at the site lost for project construction. b. Non-native species cover will be no more than 5 percent absolute cover through the term of the restoration. c. Giant reed (*Arundo donax*), tamarisk (*Tamarix ramosissima*), perennial pepperweed (*Lepidium latifolium*), tree of heaven (*Ailanthus altissimus*), pampas grass (*Cortaderia selloana*), and any species listed on the California State Agricultural list (CDFA 2009) or Cal-IPC list of noxious weeds (Cal-IPC 2006, 2007) will not be present on the revegetation site as of the date of completion approval.

LV 4.4-5. The Draft RMDP Slender Mariposa Lily Mitigation and Monitoring Plan (Dudek 2007I) shall be revised and submitted to CDFG and the County for review and approval prior to ground disturbance to occupied habitat. Upon approval, the plan will be implemented by the applicant or its designee. The revised plan will demonstrate the feasibility of enhancing or restoring slender mariposa lily habitat in selected areas to be managed as natural open space (*i.e.*, the Salt Creek area or High Country SMA/SEA 20, spineflower preserves, or River Corridor SMA/SEA 23) without conflicting with other resource management objectives. Habitat replacement/enhancement will be at a 1:1 ratio (acres restored/enhanced to acres impacted).

The revised plan will describe habitat improvement/restoration measures to be completed prior to introducing slender mariposa lily. Habitat improvement/restoration will be based on native occupied slender mariposa lily habitat. The revised plan will specify: (1) the location of mitigation sites (may be selected from among 559 acres of suitable mitigation land in the High Country SMA/SEA 20 and Salt Creek area identified in the Draft Newhall Ranch Mitigation Feasibility Study (Dudek 2007A); (2) a description of "target" vegetation (native shrubland or grassland) to include estimated cover and abundance of native shrubs and grasses in occupied slender mariposa lily habitat on Newhall Ranch land (either at sites to be destroyed by construction or at sites to be preserved); (3) site preparation measures to include topsoil treatment, soildecompaction, erosion control, temporary irrigation systems, or other measures as appropriate; (4) methods for the removal of non-native plants (*e.g.*, mowing, weeding, raking, herbicide application, or burning); (5) the source of all plant propagules (seed, potted nursery stock, *etc.*), the quantity and species of seed or potted stock of all plants to be introduced or planted into the restoration/enhancement areas; (6) a schedule and action plan to maintain and monitor the enhancement/restoration areas, to include at minimum, qualitative annual monitoring for revegetation success and site degradation due to erosion, trespass, or animal damage for a period no less than two years; (7) as needed where sites are near trails or other access points, measures such as fencing, signage, or security patrols to exclude unauthorized entry into the restoration/enhancement areas; and (8) contingency measures such as replanting, weed control, or erosion control to be implemented if habitat improvement/restoration efforts are not successful.

<u>8.0 Mitigation Monitoring Plan</u>	
	3. Prior to the Issuance of Grading Permits
Applicant (Project Biologist)	1. LACDRP/CDFG
	2. LACDRP/CDFG

Habitat restoration/enhancement will be judged successful when (1) percent cover and species richness of native species reach 50 percent of their cover and species richness at undisturbed occupied slender mariposa lily habitat at reference sites; and (2) the replacement vegetation has persisted at least one summer without irrigation. At that point slender mariposa lily propagules (seed or bulbs) will be introduced onto the site. The revised plan will specify methods to collect propagules and introduce slender mariposa lily into these mitigation sites. Introductions will use source material (seeds or bulbs) from no more than 1.0 mile distant, similar slope exposures, and no more than 500 ft. elevational difference from the mitigation site, unless otherwise approved by CDFG and the County. Bulbs may be salvaged and transplanted from slender mariposa lily occurrences to be lost; alternately, seed may be collected from protected occurrences, following CDFG-approved seed collection guidelines (*i.e.*, MOU for rare plant seed collection). No bulbs will be translocated into areas within 300 feet of proposed or existing development. Newhall Land or its designee will monitor the reintroduction sites for no fewer than five additional years to estimate slender mariposa lily survivorship (for bulbs) or seedling establishment (for seeded sites).

Annual monitoring reports will be prepared and submitted to CDFG and the County and will be made available to the public to guide future mitigation planning for slender mariposa lily. Monitoring reports will describe all restoration/enhancement measures taken in the preceding year; describe success and completion of those efforts and other pertinent site conditions (erosion, trespass, animal damage) in qualitative terms; and describe mariposa lily survival or establishment in quantitative terms.

Newhall Land or its designee will monitor the reintroduction sites for no fewer than five additional years to estimate slender mariposa lily survivorship (for bulbs) or seedling establishment (for seeded sites). Annual monitoring reports will be prepared and submitted to CDFG and the County and will be made available to the public to guide future mitigation planning for slender mariposa lily. Monitoring reports will describe all restoration/enhancement measures taken in the preceding year; describe success and completion of those efforts and other pertinent site conditions (erosion, trespass, animal damage) in qualitative terms; and describe mariposa lily survival or establishment in quantitative terms.

LV 4.4-6. The Oak Resource Replacement Plan to be prepared (as described in **SP 4.6-48**) shall include measures to create, enhance, and/or restore 7.82 acres of coast live oak woodland within the High Country SMA/SEA 20. The plan shall be subject to the requirements outlined in **SP 4.6-48**.

The applicant shall prepare an Oak Resource Management Plan that incorporates the findings of the Draft Newhall Ranch Mitigation Feasibility Report (Dudek 2007A) and areas identified (in the technical report) as being suitable for oak woodland enhancement and creation shall be used as mitigation. Other mitigation sites may be used upon approval by the County. The plan shall be reviewed by the County Forester. The plan shall include the following: (1) site selection and preparation; (2) selection of proper species, including sizes and planting densities; (3) protection from herbivores; (4) site maintenance; (5) success criteria; (6) remedial actions; and (7) a monitoring program.

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Monitoring Reports to be Prepared Annually for Five (5) Years	3. Prior to Ground Disturbance to Occupied Habitat
Receipt and Review of Oak Resource Replacement Plan	1. LA County Forester
	2. LA County Forester
	3. Prior to Final Subdivision Map Recordation

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<p>LV 4.4-7. All oaks that are (1) will not being removed, and (2)that are regulated under the County of Los Angeles Oak Tree Ordinance (CLAOTO) with driplines within 50 feet of land clearing (including brush clearing) or areas to be graded shall be enclosed in a temporary fenced zone for the duration of the clearing or grading activities. Fencing shall extend to the root protection zone (i.e., the area at least 15 feet from the trunk or half again as large as the distance from the trunk to the drip line, whichever distance is greater). No parking or storage of equipment, solvents, or chemicals that could adversely affect the trees shall be allowed within 25 feet of the trunk at any time. Removal of the fence shall occur only after the project arborist or qualified biologist confirms the health of preserved trees.</p>	<p>Applicant (Construction Superintendent)</p>	<p>Field Verification</p>	<p>1. LACDRP 2. LACDRP 3. During Grading and All Phases of Construction</p>
<p>LV 4.4-8. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities that result in any disturbance to the banks or wetted channel, aquatic habitats within construction sites and access roads, as well as all aquatic habitats within 300 feet of construction sites and access roads, shall be surveyed by a qualified biologist for the presence of the unarmored threespine stickleback, arroyo chub, and Santa Ana sucker. The Corps and CDFG shall be notified at least 14 days prior to the survey and shall have the option of attending. The biologist shall file a written report of the survey with both agencies within 14 days of the survey and no later than 10 days prior to any construction work in the riverbed.</p>	<p>Applicant (Project Biologist)</p>	<p>Surveys conducted for unarmored threespine stickleback, arroyo chub, and Santa Ana sucker</p>	<p>1. LACDRP/CDFG/ACOE/USFWS</p>
<p>If there is evidence that fish spawn has occurred in the survey area, then surveys shall cease unless otherwise authorized by USFWS. If surveys determine that gravid fish are present, that spawning has recently occurred, or that juvenile fish are present in the proposed construction areas, all activities within aquatic habitat will be suspended. Construction within aquatic habitats shall only occur when it is determined that juvenile fish are not present within the Project area.</p>		<p>Written report shall be filed 10 days prior to any construction in riverbed</p>	<p>2. LACDRP/CDFG/ACOE/USFWS 3. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities that result in any disturbance to the banks or wetted channel</p>

		<u>8.0 Mitigation Monitoring Plan</u>	
<p>LV 4.4-9. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities, all construction sites and access roads within the riverbed as well as all riverbed areas within 500 feet of construction sites and access roads shall be surveyed at the appropriate season for southwestern pond turtle. Focused surveys shall consist of a minimum of four daytime surveys, to be completed between April 1 and June 1. The survey schedule may be adjusted in consultation with CDFG to reflect the existing weather or stream conditions. The applicant shall develop a Plan to address the relocation of southwestern pond turtle. The Plan shall include but not be limited to the timing and location of the surveys that would be conducted for this species; identify the locations where more intensive efforts should be conducted; identify the habitat and conditions in the proposed relocation site(s); the methods that would be utilized for trapping and relocating individuals; and provide for the</p>	Applicant (Project Biologist)	Receipt and Review of Survey and Relocation Plan for the Southwestern Pond Turtle The Plan shall be approved by CDFG 60 days	1. LACDRP/CDFG
<p>documentation/recordation of the numbers of animals relocated. The Plan shall be submitted to CDFG for approval 60 days prior to any ground-disturbing activities within potentially occupied habitat.</p>			2. LACDRP/CDFG
<p>If southwestern pond turtles are detected in or adjacent to the Project, nesting surveys shall be conducted. Focused surveys for evidence of southwestern pond turtle nesting shall be conducted in, or adjacent to, the Project when suitable nesting habitat exists within 1,300 feet of occupied habitat in an area where Project-related ground disturbance will occur (<i>e.g.</i>, development, ground disturbance). If both of those conditions are met, a qualified biologist shall conduct focused, systematic surveys for southwestern pond turtle nesting sites. The survey area shall include all suitable nesting habitat within 1,300 feet of occupied habitat in which Project-related ground disturbance will occur. This area may be adjusted based on the existing topographical features on a case-by-case basis with the approval of CDFG. Surveys will entail searching for evidence of pond turtle nesting, including remnant eggshell fragments, which may be found on the ground following nest depredation.</p>			3. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities that result in any disturbance to the banks or wetted channel.
<p>If a southwestern pond turtle nesting area would be adversely impacted by construction activities, the applicant shall avoid the nesting area. If avoidance of the nesting area is determined to be infeasible, the authorized biologist shall coordinate with CDFG to identify if it is possible to relocate the pond turtles. Eggs or hatchlings shall not be moved without written authorization from CDFG. The qualified biologist shall be present during all activities immediately adjacent to or within habitat that supports populations of southwestern pond turtle. Clearance surveys for pond turtles shall be conducted within 500 feet of potential habitat by the authorized biologist prior to the initiation of construction each day. The resume of the proposed biologist will be provided to CDFG for approval prior to conducting the surveys.</p>			

8.0 Mitigation Monitoring Plan

<p>LV 4.4-10. Temporary bridges, culvert crossings, or other feasible methods of providing access across the river shall be constructed outside of the winter season and not during periods when spawning is occurring. Prior to the construction of any temporary or permanent crossing of the Santa Clara River, the applicant shall develop a Stream Crossing and Diversion Plan. The plan shall include the following elements: the timing and methods for pre-construction aquatic species surveys; a detailed description of the diversion methods (e.g., berms shall be constructed of on-site alluvium materials of low silt content, inflatable dams, sand bags, or other approved materials); special-status species relocation; fish exclusion techniques, including the use of block netting and fish relocation; methods to maintain fish passage during construction; channel habitat enhancement, including the placement of vegetation, rocks, and boulders to produce riffle habitat; fish stranding surveys; and the techniques for the removal of crossings prior to winter storm flows.</p>	<p>Applicant (Project Biologist)</p>	<p>Review and Approval of a Stream Crossing and Diversion Plan</p> <p>At least 30 days prior to Implementation of Plan and prior to the construction of any temporary or permanent crossing of the Santa Clara River</p>	<p>1. LACDRP/CDFG/ACOE/USFWS</p>
<p>The plan shall be submitted to the USFWS and CDFG for approval at least 30 days prior to implementation. If adult special-status fishes are present and spawning has not occurred, they shall be relocated prior to the diversion or crossing. Block nets of 0.125-inch woven mesh will be set upstream and downstream. On days with possible high temperature or low humidity (temperatures in excess of 80° F), work will be done in the early morning hours, as soon as sufficient light is available, to avoid exposing fishes to high temperatures and/or low humidity. If high temperatures are present, the fishes will be herded to downstream areas past the block net. Once the fishes have been excluded by herding, a USFWS staff member or his or her agents shall inspect the site for remaining or stranded fish. A USFWS staff member or his or her agents shall relocate the fish to suitable habitat outside the Project area (including those areas potentially subject to high turbidity). During the diversion/relocation of fishes, the USFWS or his or her agents shall be present at all times.</p>			<p>2. LACDRP/CDFG/ACOE/USFWS</p> <p>3. Prior to the construction of any temporary or permanent crossing of the Santa Clara River,</p>
<p>LV 4.4-11. a. Stream diversion bypass channels: Stream diversion bypass channels will be constructed when the active wetted channel is within the work zone. Diversion bypass channels will be built in consultation with CDFG/USFWS. Equipment shall not be operated in areas of ponded or flowing water unless authorized by CDFG/USFWS. The diversion channel shall be of a width and depth comparable to the natural river channel. In all cases where flowing water is diverted from a segment of the stream channel, the bypass channel will be constructed prior to the diversion of the active stream. The bypass channel will be constructed prior to diverting the stream, beginning in the downstream area and continuing in an upstream direction. Where feasible and in consultation with CDFG/USFWS, the configuration of the diversion channel will be curved (sinuous) with multiple sets of obstructions (i.e., boulders, large logs, or other CDFG/USFWS-approved materials) placed in the channel at the point of each curve (i.e., on alternating sides of the channel). If emergent aquatic vegetation is</p>	<p>Applicant (Restoration Ecologist)</p>	<p>Placement of Stream Diversion Channels</p>	<p>1. CDFG/ACOE/USFWS</p>

<p>present in the original channel, the applicant will transplant suitable vegetation into the diversion channel and on the banks prior to or at the time of the water diversion. A qualified restoration ecologist will supervise the construction of the diversion channels on site. The integrity of the channel and diversion shall be maintained throughout the intended diversion period. Channel bank or barrier construction shall be adequate to prevent seepage into or from the work area. Construction of diversion channels shall not occur if surveys determine that gravid fish are present, spawning has recently occurred, or juvenile fish are present in the proposed construction areas. At the conclusion of the diversion, either at the commencement of the winter season, or the completion of construction, the applicant will coordinate with CDFG/USFWS to determine if the diversion should be left in place or the stream returned to the original channel. If CDFG/USFWS determine the stream should be diverted to the original channel, the original channel will be modified prior to re-diversion (i.e., while dry) to</p>			<p>8.0 Mitigation Monitoring Plan 2. CDFG/ACOE/USFWS</p>
<p>construct curves (sinuosity) into that channel, including the placement of obstructions (i.e., boulders, large logs, or other CDFG/USFWS-approved materials). The original channel will be replanted with emergent vegetation as the diversion channel was planted. If the diversion channel is abandoned, the boulders will remain in place. • b. Dewatering: Construction dewatering in close proximity to stream flow shall implement the following: Assess local stream and groundwater conditions, including flow depths, groundwater elevations, and anticipated dewatering cone of influence (radius of draw down). Assess surface water elevations upstream, adjacent to, and downstream of the extraction points, to assess any critical flow regimes susceptible to excessive draw down and therefore fish stranding issues. Assess surface water elevations downstream of the discharge locations (if discharge is proposed to the flowing stream) to assess any flow regimes and overbank areas that may be susceptible to flooding and therefore fish stranding at the cessation of discharge.</p>			<p>3. Prior to Construction Activities in an Active Wetted Channel</p>
<p>Discharge locations shall also be assessed for potential channel bed erosion from dewatering discharge, and appropriate BMPs must be implemented to prevent excessive erosion or turbidity in the discharge. • The information above shall be summarized and provided in a plan approved by CDFG and Corps. Fish shall be excluded from any artificial flowing channels from dewatering discharge. Methods to ensure separation may include, but are not limited to: block netting at the confluence; creation of a physical drop greater than four inches at the confluence; or maintaining a velocity range unsuitable for fish passage, such as a berm at the confluence with small diameter pipes for discharge.</p>			
<p>LV 4.4-12. Slow-moving water habitats shall be constructed upstream and downstream of any river crossing or bridge construction area to provide refuge for special-status fishes during construction. Where feasible and in consultation with CDFG and USFWS, the applicant shall enhance slow-moving water habitats for each linear foot disturbed by hand-excavating shallow side channels and placing multiple sets of obstructions (e.g., boulders, large logs, or other CDFG- and USFWS-approved materials) in the channel.</p>	<p>Applicant</p>	<p>Enhancement of Slow-Moving Water Habitats Field</p>	<p>1. LACDRP/CDFG/USFWS 2. LACDRP/CDFG/USFWS 3. Prior to Any River Crossings or Bridge Construction</p>

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<p>LV 4.4-13. Installation of bridges, culverts or other structures shall not impair movement of fish and aquatic life. Bottoms of temporary culverts shall be placed at or below channel grade. Bottoms of permanent culverts shall be placed below channel grade. Culvert crossings shall include provisions for a low flow channel where velocities are less than two feet per second to allow fish passage.</p>	<p>Applicant</p>	<p>Review of Construction Plan and Field Verification</p>	<p>1. LACDRP 2. LACDRP 3. Prior to Any River Crossings or Bridge Construction</p>
<p>LV 4.4-14. Water containing mud, silt, or other pollutants from construction activities shall not be allowed to enter a flowing stream or be placed in locations that may be subject to normal storm flows during periods when storm flows can reasonably be expected to occur.</p>	<p>Applicant (Construction Superintendent)</p>	<p>Field Verification</p>	<p>1. LACDRP 2. LACDRP 3. During Construction</p>
<p>LV 4.4-15. Temporary impacts from construction activities in the riverbed shall be restricted to the following areas of disturbance: (1) an 85-foot-wide zone that extends into the river from the base of the rip-rap or gunitite bank protection where it intercepts the river bottom; (2) 100 feet on either side of the outer edge of a new bridge or bridge to be modified; (3) a 60-foot-wide corridor for utility lines; (4) 20-foot-wide temporary access ramps; and (5) 60-foot roadway width temporary construction haul routes. The locations of these temporary construction sites and the routes of all access roads shall be shown on maps submitted with the sub-notification letter submitted to the Corps and CDFG for individual project approval. Any variation from these limits shall be submitted, with a justification for a variation for Corps and CDFG approval.</p>	<p>Applicant (Construction Superintendent)</p>	<p>Construction Plan Review Field Verification</p>	<p>1. LACDRP/CDFG/ACOE 2. LACDRP/CDFG/ACOE</p>
<p>The construction plans should indicate what type of vegetation, if any, would be temporarily disturbed or removed and the post-construction activities to facilitate revegetation of the temporarily impacted areas. The boundaries of the construction site and any temporary access roads within the riverbed shall be marked in the field with stakes and flagging. No construction activities, vehicular access, equipment storage, stockpiling, or significant human intrusion shall occur outside the work area and access roads.</p>			<p>3. Concurrent with the submission of Sub-Notification Letter</p>

		<u>8.0 Mitigation Monitoring Plan</u>	
<p>LV 4.4-16. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities, all construction sites and access roads within the riverbed as well as all riverbed areas within 300 feet of construction sites and access roads shall be surveyed at the appropriate season for two-striped garter snake and south coast garter snake. Focused surveys shall consist of a minimum of four daytime surveys, to be completed between April 1 and September 1. The survey schedule may be adjusted in consultation with CDFG to reflect the existing weather or stream conditions. If located, the species will be relocated to suitable pre-approved locations identified in the two-striped garter snake and/or south coast garter snake Relocation Plan. The applicant shall develop a Plan to address the relocation of two-striped garter snake and south coast garter snake.</p>	Applicant (Project Biologist)	<p>Receipt and Review of Survey and Relocation Plan for the Two-Striped Garter Snake and South Coast Garter Snake</p>	<p>1. LACDRP/CDFG 2. LACDRP/CDFG 3. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities, all construction sites and access roads within the riverbed as well as all riverbed areas within 300 feet of construction sites and access roads</p>
<p>The Plan shall include but not be limited to the timing and location of the surveys that would be conducted for each species, identify the locations where more intensive efforts should be conducted, identify the habitat and conditions in the proposed relocation site(s), identify the methods that would be utilized for trapping and relocating the individual species, and provide for the documentation/recordation of the species and number of animals relocated. The Plan shall be submitted to CDFG for approval 60 days prior to any ground-disturbing activities, within potentially occupied habitat. The qualified biologist shall be present during all activities immediately adjacent to or within habitat that supports populations of two-striped garter snake and/or south coast garter snake. Clearance surveys for garter snakes shall be conducted within 200 feet of potential habitat by the authorized biologist prior to the initiation of construction each day. The resume of the proposed biologists will be provided to CDFG for approval prior to conducting the surveys.</p>		<p>The Plan shall be approved by CDFG 60 days prior ground disturbing activities within potential occupied habitat</p>	

		<u>8.0 Mitigation Monitoring Plan</u>	
<p>LV 4.4-17. Focused surveys for arroyo toad shall be conducted. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities, all construction sites and access roads within the riverbed as well as all riverbed areas within 1,000 feet of construction sites and access roads shall be surveyed at the appropriate season for arroyo toad. The applicant shall contract with a qualified biologist to conduct focused surveys for arroyo toad. If detected in or adjacent to the Project area, no work will be authorized within 500 feet of occupied habitat until the applicant provides concurrence from the USFWS to CDFG and the Corps. The applicant shall implement measures required by the USFWS Biological Opinion that either supplement or supercede these measures. If present, the applicant shall develop and implement a monitoring plan that includes the following measures in consultation with the USFWS and CDFG.</p>	Applicant (Project Biologist)	Receipt and Review of Survey Report for the Arroyo Toad Field Monitoring	1. LACDRP/USFWS/CDFG
<p>1. The applicant shall retain a qualified biologist with demonstrated expertise with arroyo toads to monitor all construction activities in potential arroyo toad habitat and assist the applicant in the implementation of the monitoring program. This person will be approved by the USFWS prior to the onset of ground-disturbing activities. This biologist will be referred to as the authorized biologist hereafter. The authorized biologist will be present during all activities immediately adjacent to or within habitat that supports populations of arroyo toad.</p> <p>2. Prior to the onset of construction activities, the applicant shall provide all personnel who will be present on work areas within or adjacent to the Project area the following information:</p> <p>a. A detailed description of the arroyo toad, including color photographs;</p> <p>b. The protection the arroyo toad receives under the Endangered Species Act and possible legal action that may be incurred for violation of the Act;</p>			2. LACDRP/USFWS/CDFG
<p>c. The protective measures being implemented to conserve the arroyo toad and other species during construction activities associated with the proposed Project; and</p> <p>d. A point of contact if arroyo toads are observed.</p> <p>3. All trash that may attract predators of the arroyo toad will be removed from work sites or completely secured at the end of each work day.</p>			3. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities, all construction sites and access roads within the riverbed as well as all riverbed areas within 1,000 feet of construction sites and access roads
<p>4. Prior to the onset of any construction activities, the applicant shall meet on site with staff from the USFWS and the authorized biologist. The applicant shall provide information on the general location of construction activities within habitat of the arroyo toad and the actions taken to reduce impacts to this species. Because arroyo toads may occur in various locations during different seasons of the year, the applicant, USFWS, and authorized biologists will, at this preliminary meeting, determine the seasons when specific construction activities would have the least adverse effect on arroyo toads. The goal of this effort is to reduce the level of mortality of arroyo toads during construction. The parties realize that complete elimination of all mortality is likely not possible because some arroyo toads may occur anywhere within suitable habitat during any given season; the detection of every individual over large areas is impossible because of the small size, fossorial habits, and cryptic coloration of the arroyo toad.</p>			

5. Where construction can occur in habitat where arroyo toads are widely distributed, work areas will be fenced in a manner that prevents equipment and vehicles from straying from the designated work area into adjacent habitat. The authorized biologist will assist in determining the boundaries of the area to be fenced in consultation with the USFWS/CDFG. All workers will be advised that equipment and vehicles must remain within the fenced work areas.
6. The authorized biologist will direct the installation of the fence and conduct a minimum of three nocturnal surveys to move any arroyo toads from within the fenced area to suitable habitat outside of the fence. If arroyo toads are observed on the final survey or during subsequent checks, the authorized biologist will conduct additional nocturnal surveys if he or she determines that they are necessary in concurrence with the USFWS/CDFG.
7. Fencing to exclude arroyo toads will be at least 24 inches in height.
8. The type of fencing must be approved by the authorized biologist and the USFWS/CDFG.
9. Construction activities that may occur immediately adjacent to breeding pools or other areas where large numbers of arroyo toads may congregate will be conducted during times of the year (fall/winter) when individuals have dispersed from these areas. The authorized biologist will assist the applicant in scheduling its work activities accordingly.
10. If arroyo toads are found within an area that has been fenced to exclude arroyo toads, activities will cease until the authorized biologist moves the arroyo toads.
11. If arroyo toads are found in a construction area where fencing was deemed unnecessary, work will cease until the authorized biologist moves the arroyo toads. The authorized biologist in consultation with USFWS/CDFG will then determine whether additional surveys or fencing are needed. Work may resume while this determination is being made, if deemed appropriate by the authorized biologist and USFWS.
12. Any arroyo toads found during clearance surveys or otherwise removed from work areas will be placed in nearby suitable, undisturbed habitat. The authorized biologist will determine the best location for their release, based on the condition of the vegetation, soil, and other habitat features and the proximity to human activities. Clearance surveys shall occur on a daily basis in the work area.
13. The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed.
14. Staging areas for all construction activities will be located on previously disturbed upland areas designated for this purpose. All staging areas will be fenced within potential toad habitat.
15. To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force (DAPTF 2009) will be followed at all times.

8.0 Mitigation Monitoring Plan

8.0 Mitigation Monitoring Plan

<p>16. Drift fence/pitfall trap surveys will be implemented in toad sensitive areas prior to construction in an effort to reduce potential mortality to this species. Prior to any construction activities in the Project area, silt fence shall be installed completely around the proposed work area and a qualified biologist should conduct a preconstruction/clearance survey of the work area for arroyo toads. Any toads found in the work area should be relocated to suitable habitat. The silt fence shall be maintained for the duration of the work activity.</p> <p>17. The applicant shall restrict work to daylight hours, except during an emergency, in order to avoid nighttime activities when arroyo toads may be present on the access road. Traffic speed should be maintained at 15 mph or less in the work area.</p>			
<p>LV 4.4-18. Prior to grading and construction activities, a qualified biologist shall be retained to conduct a Worker Environmental Awareness Program (WEAP) for all construction/contractor personnel. A list of construction personnel who have completed training prior to the start of construction shall be maintained retained on site and this list shall be updated as required when new personnel start work. No construction worker may work in the field for more than five days without participating in the WEAP. The qualified biologist shall provide ongoing guidance to construction personnel and contractors to ensure compliance with environmental/permit regulations and mitigation measures. The qualified biologist shall perform the following:</p> <p>1. Provide training materials and briefings to all personnel working on site. The material shall include but not be limited to the identification and status of plant and wildlife species, significant natural plant community habitats (e.g., riparian), fire protection measures, and review of mitigation requirements.</p>	Applicant (Project Biologist)	Participation in a WEAP Field Verification	1. LACDRP/CDFG
<p>2. A discussion of the federal and state Endangered Species Acts, Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act, other state or federal permit requirements and the legal consequences of non-compliance with these acts;</p> <p>3. Attend the pre-construction meeting to ensure that timing/location of construction activities do not conflict with other mitigation requirements (e.g., seasonal surveys for nesting birds, pre-construction surveys, or relocation efforts);</p> <p>4. Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas. Maps showing the location of special-status wildlife or populations of rare plants, exclusion areas, or other construction limitations (e.g., limitations on nighttime work) will be provided to the environmental monitors and construction crews prior to ground disturbance; <u>This applies to preconstruction activities, such as site surveying and staking, natural resources surveying or reconnaissance, establishment of water quality BMPs, and geotechnical or hydrological investigations;</u></p>			2. LACDRP/CDFG

<p>5. Discuss procedures for minimizing harm to or harassment of wildlife encountered during construction and provide a contact person in the event of the discovery of dead or injured wildlife;</p> <p>6. Review/designate the construction area in the field with the contractor in accordance with the final grading plan;</p> <p>7. Ensure that haul roads, access roads, and on-site staging and storage areas are sited within grading areas to minimize degradation of vegetation communities adjacent to these areas (if activities outside these limits are necessary, they shall be evaluated by the biologist to ensure that no special-status species habitats will be affected);</p> <p>8. Conduct a field review of the staking (to be set by the surveyor) designating the limits of all construction activity;</p>		8.0 Mitigation	<p>Monitoring Plan</p> <p>3. During Grading and All Phases of Construction Adjacent to Special- Status Habitat</p>
<p>9.8. Flag or temporarily fence any construction activity areas immediately adjacent to riparian areas;</p> <p>10. Ensure and document that required pre-construction surveys and/or relocation efforts have been implemented;</p> <p>To reduce the potential for the spread of exotic invasive invertebrates (e.g. New Zealand mud snails) and weeds (including weed seeds) during Project clearing and construction, all heavy equipment proposed for use on the Project site shall be verified cleaned (including wheels, tracks, undercarriages, and bumpers, as applicable) before delivery to the Project site. Equipment must be documented as exotic invasive invertebrate (e.g. mud snail) and weed free upon delivery to the Project site initial staging area, including:</p> <p>(1) vegetation clearing equipment (skid steer loaders, loaders, dozers, backhoes, excavators, chippers, grinders, and any hauling equipment, such as off-road haul trucks, flat bed, or other vehicles); (2) earth-moving equipment (scrapers, dozers, excavators, loaders, motor-graders, compactors, backhoes, off-road water trucks, and off-road haul trucks); and (3) all Project-associated vehicles (including personal vehicles) that, upon inspection by the monitoring biologist, are deemed to present a risk for spreading exotic invasive invertebrates (e.g. mud snails) or weeds. Equipment shall be cleaned at existing construction yards or at a wash station.</p>			
<p>The biological monitor shall document that all construction equipment (as described above) has been cleaned prior to working within the Project work site. Any equipment/vehicles determined to not be free of exotic invasive invertebrates (e.g. mud snails) and weeds shall immediately be sent back to the originating construction yard for washing, or wash station where rinse water is collected and disposed of in either a sanitary sewer or other legal point of disposal. Equipment/vehicles moved from the site must be inspected, and re-washed as necessary, prior to re-engaging in construction activities in the Project work area. A written daily log shall be kept for all vehicle/equipment washing that states the date, time, location, type of equipment washed, methods used, and location of work;</p> <p>11.9. Be present during initial vegetation clearing and grading; and</p> <p>12.10. Submit to the CDFG an immediate report (within 72 hours) of any conflicts or errors resulting in impacts to special-status biological resources.</p>			

8.0 Mitigation Monitoring Plan		
<p>LV 4.4-19. Prior to the ground disturbance in aquatic areas, construction, or site preparation activities, the applicant shall retain the services of a qualified biologist to conduct pre-construction surveys for western spadefoot toad within all portions of the Project site containing suitable breeding habitat. Surveys shall be conducted during a time of year when the species could be detected (e.g., the presence of rain pools). If western spadefoot toad is identified on the Project site, the following measures will be implemented.</p>	Applicant (Project Biologist)	<p>Pre-Construction Surveys for the Western Spadefoot Toads</p> <p>1. LACDRP/CDFG</p>
<p>1. Under the direct supervision of the qualified biologist, western spadefoot toad habitat shall be created within suitable natural sites on the Specific Plan site outside the proposed development envelope. The amount of occupied breeding habitat to be impacted by the Project shall be replaced at a 2:1 ratio. The actual relocation site design and location shall be approved by CDFG. The location shall be in suitable habitat as far away as feasible from any of the homes and roads to be built. The relocation ponds shall be designed such that they only support standing water for several weeks following seasonal rains in order that aquatic predators (e.g., fish, bullfrogs, and crayfish) cannot become established. Terrestrial habitat surrounding the proposed relocation site shall be as similar in type, aspect, and density to the location of the existing ponds as feasible.</p>		<p>Monitor Relocation Sites for Five (5) Years and Preparation of Annual Monitoring Report</p> <p>2. LACDRP/CDFG</p>
<p>No site preparation or construction activities shall be permitted in the vicinity of the currently occupied ponds until the design and construction of the pool habitat in preserved areas of the site has been completed and all western spadefoot toad adults, tadpoles, and egg masses detected are moved to the created pool habitat.</p> <p>2. Based on appropriate rainfall and temperatures, generally between the months of February and April, the biologist shall conduct a series of pre-construction surveys in all appropriate vegetation communities within the development envelope. Surveys will include evaluation of all previously documented occupied areas and a reconnaissance-level survey of the remaining natural areas of the site. All western spadefoot adults, tadpoles, and egg masses encountered shall be collected and released in the identified/created relocation ponds described above.</p>		<p>3. Prior to Ground Disturbance in Aquatic Areas, Construction, or Site Preparation Activities</p>

3. The qualified biologist shall monitor the relocation site for five years, involving annual monitoring during and immediately following peak breeding season such that surveys can be conducted for adults as well as for egg masses and larval and post-larval toads. Further, survey data will be provided to CDFG by the monitoring biologist following each monitoring period and a written report summarizing the monitoring results will be provided to CDFG at the end of the monitoring effort. Success criteria for the monitoring program shall include verifiable evidence of toad reproduction at the relocation site.

4. Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas. Maps showing the location of special-status wildlife or populations of rare plants, exclusion areas, or other construction limitations (e.g., limitations on nighttime work) will be provided to the environmental monitors and construction crews prior to ground disturbance. This applies to preconstruction activities, such as site surveying and staking, natural resources surveying or reconnaissance, establishment of water quality BMPs, and geotechnical or hydrological investigations;

5. Discuss procedures for minimizing harm to or harassment of wildlife encountered during construction and provide a contact person in the event of the discovery of dead or injured wildlife;

6. Review/designate the construction area in the field with the contractor in accordance with the final grading plan;

7. Ensure that haul roads, access roads, and on-site staging and storage areas are sited within grading areas to minimize degradation of vegetation communities adjacent to these areas (if activities outside these limits are necessary, they shall be evaluated by the biologist to ensure that no special-status species habitats will be affected);

8. Conduct a field review of the staking (to be set by the surveyor) designating the limits of all construction activity;

8-9. Flag or temporarily fence any construction activity areas immediately adjacent to riparian areas;

8.0 Mitigation Monitoring Plan

<p><u>10. Ensure and document that required pre-construction surveys and/or relocation efforts have been implemented;</u></p> <p><u>To reduce the potential for the spread of exotic invasive invertebrates (e.g. New Zealand mud snails) and weeds (including weed seeds) during Project clearing and construction, all heavy equipment proposed for use on the Project site shall be verified cleaned (including wheels, tracks, undercarriages, and bumpers, as applicable) before delivery to the Project site. Equipment must be documented as exotic invasive invertebrate (e.g. mud snail) and weed free upon delivery to the Project site initial staging area, including: (1) vegetation clearing equipment (skid steer loaders, loaders, dozers, backhoes, excavators, chippers, grinders, and any hauling equipment, such as off-road haul trucks, flat bed, or other vehicles); (2) earth-moving equipment (scrapers, dozers, excavators, loaders, motor-graders, compactors, backhoes, off-road water trucks, and off-road haul trucks); and (3) all Project-associated vehicles (including personal vehicles) that, upon inspection by the monitoring biologist, are deemed to present a risk for spreading exotic invasive invertebrates (e.g. mud snails) or weeds. Equipment shall be cleaned at existing construction yards or at a wash station.</u></p> <p><u>The biological monitor shall document that all construction equipment (as described above) has been cleaned prior to working within the Project work site. Any equipment/vehicles determined to not be free of exotic invasive invertebrates (e.g. mud snails) and weeds shall immediately be sent back to the originating construction yard for washing, or wash station where rinse water is collected and disposed of in either a sanitary sewer or other legal point of disposal. Equipment/vehicles moved from the site must be inspected, and re-washed as necessary, prior to re-engaging in construction activities in the Project work area. A written daily log shall be kept for all vehicle/equipment washing that states the date, time, location, type of equipment washed, methods used, and location of work;</u></p> <p>9.11. Be present during initial vegetation clearing and grading; and</p> <p>10.12. Submit to the CDFG an immediate report (within 72 hours) of any conflicts or errors resulting in impacts to special-status biological resources.</p>			
<p>LV 4.4-20. Prior to construction the applicant shall develop a relocation plan for coast horned lizard, silvery legless lizard, coastal western whiptail, rosy boa, San Bernardino ringneck snake, and coast patch-nosed snake. The Plan shall include but not be limited to the timing and location of the surveys that would be conducted for each species; identify the locations where more intensive efforts should be conducted; identify the habitat and conditions in the proposed relocation site(s); the methods that would be utilized for trapping and relocating the individual species; and provide for the documentation/recordation of the species and number of the animals relocated. The Plan shall be submitted to CDFG for approval 60 days prior to any ground disturbing activities within potentially occupied habitat.</p>	<p>Applicant (Project Biologist)</p>	<p>Receipt and Review of Relocation Plan for Coast Horned Lizard, Silvery Legless Lizard, Coastal Western Whiptail, Rosy</p>	<p>1. LACDRP/CDFG</p>

<p>The Plan shall include the specific survey and relocation efforts that would occur for construction activities that occur both during the activity period of the special status species (generally March to November) and for periods when the species may be present in the work area but difficult to detect due to weather conditions (generally December through February). Thirty days prior to construction activities in coastal scrub, chaparral, oak woodland, riparian habitats, or other areas supporting these species qualified biologists shall conduct surveys to capture and relocate individual coast horned lizard, silvery legless lizard, coastal western whiptail, rosy boa, San Bernardino ringneck snake, and coast patch-nosed snake in order to avoid or minimize take of these special-status species. The plan shall require a minimum of three surveys conducted during the time of year/day when each species is most likely to be observed.</p>
<p>Individuals shall be relocated to nearby undisturbed areas with suitable habitat. If construction is scheduled to occur during the low activity period (generally December through February) the surveys shall be conducted prior to this period if possible and exclusion fencing shall be placed to limit the potential for recolonization of the site prior to construction. The qualified biologist will be present during ground-disturbing activities immediately adjacent to or within habitat that supports populations of these species. Clearance surveys for special-status reptiles shall be conducted by a qualified biologist prior to the initiation of construction each day.</p> <p>Results of the surveys and relocation efforts shall be provided to CDFG in the annual mitigation status report. Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.</p>

8.0 Mitigation Monitoring Plan	
Boa, San Bernardino Ringneck Snake, and Coast Patch-Nosed Snake	2. LACDRP/CDFG
At least 60 days prior to any ground disturbing activities within potentially occupied habitat	3. Prior to the Commencement of Grading/Construction Activities Within Suitable Habitat

		<u>8.0 Mitigation Monitoring Plan</u>	
<p>LV 4.4-21. Within 30 days of ground disturbing disturbance activities associated with construction or grading that would occur during the nesting/breeding season of native bird species potentially nesting on the site (typically March through August in the Project region, or as determined by a qualified biologist), the applicant shall have weekly surveys conducted by a qualified biologist to determine if active nests of bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the disturbance zone or within 300 feet (500 feet for raptors) of the disturbance zone. <u>Pre-construction surveys shall include nighttime surveys to identify active rookery sites.</u>The surveys shall continue on a weekly basis with the last survey being conducted no more than 7 days prior to initiation of disturbing disturbance work. If ground disturbance activities are delayed, then additional pre-disturbance surveys shall be conducted such that no more than 7 days will have elapsed between the survey and ground disturbance disturbing activities.</p>	<p>Applicant (Project Biologist)</p>	<p>Conduct Bird Surveys</p>	<p>1. LACDRP/CDFG</p>
<p>If active nests are found, clearing and construction within 300 feet of the nest (500 feet for raptors) shall be postponed or halted, at the discretion of the biologist in consultation with CDFG, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. In the event that golden eagles establish an active nest in the River Corridor SMA/SEA 23, the buffers will be established in consultation with CDFG. Potential golden eagle nesting will be reported to CDFG within 24 hours. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers and construction personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as a construction monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts to these nests occur. Results of the surveys shall be provided to CDFG in the annual mitigation status report.</p>			<p>2. LACDRP/CDFG</p>
<p>For listed riparian songbirds (least Bell's vireo, southwestern willow flycatcher, yellow-billed cuckoo) USFWS protocol surveys shall be conducted. If active nests are found, clearing and construction within 300 feet of the nest shall be postponed or halted, at the discretion of the biologist in consultation with CDFG and USFWS, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. If no active nests are observed, construction may proceed. If active nests are found, work may proceed provided that construction activity is located at least 300 feet from active nests (or as authorized through the context of the Biological Opinion and 2081b Incidental Take Permit). This buffer may be adjusted provided noise levels do not exceed 60 dB(A) hourly Leq at the edge of the nest site as determined by a qualified biologist in coordination with a qualified acoustician.</p>			<p>3. Within 30 Days of Ground Disturbance Activities</p>

If the noise meets or exceeds the 60 dB(A) Leq threshold, or if the biologist determines that the construction activities are disturbing nesting activities, the biologist shall have the authority to halt the construction and shall devise methods to reduce the noise and/or disturbance in the vicinity. This may include methods such as, but not limited to, turning off vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nest site and the construction activities, and working in other areas until the young have fledged. If noise levels still exceed 60 dB(A) Leq hourly at the edge of nesting territories and/or a no-construction buffer cannot be maintained, construction shall be deferred in that area until the nestlings have fledged. All active nests shall be monitored on a weekly basis until the nestlings fledge. The qualified biologist shall be responsible for documenting the results of the surveys and the ongoing monitoring and for reporting these results to CDFG and USFWS.

For coastal California gnatcatcher, the applicant shall conduct USFWS protocol surveys in suitable habitat within the Project area and all areas within 500 feet of access or construction-related disturbance areas. Suitable habitats, according to the protocol, include "coastal sage scrub, alluvial fan, chaparral, or intermixed or adjacent areas of grassland and riparian habitats." A permitted biologist shall perform these surveys according to the USFWS' (1997a) Coastal California Gnatcatcher Presence/Absence Survey Guidelines. If a territory or nest is confirmed, the USFWS and CDFG shall be notified immediately. If present, a 500-foot disturbance-free buffer shall be established and demarcated by fencing or flagging. No Project activities may occur in these areas unless otherwise authorized by USFWS and CDFG. Construction activities in suitable gnatcatcher habitat will be monitored by a full-time qualified biologist. The monitoring shall be of a sufficient intensity to ensure that the biologist could detect the presence of a bird in the construction area.

<i>8.0 Mitigation Monitoring Plan</i>	

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<p>LV 4.4-22. Thirty days prior to construction activities, a qualified biologist shall conduct CDFG protocol surveys to determine whether the burrowing owl is present at the site. The surveys shall consist of three site visits and shall be conducted in areas dominated by field crops, disturbed habitat, grasslands, and along levee locations, or if such habitats occur within 500 feet of a construction zone. If located, occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFG verifies through non-invasive methods that either the birds have not begun egg-laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival. If the burrowing owl is detected but nesting is not occurring, construction work can proceed after any owls have been evacuated from the site using CDFG-approved burrow closure procedures and after alternative nest sites have been provided in accordance with the CDFG Staff Report on Burrowing Owl Mitigation (10-17-95).</p>	<p>Applicant (Project Biologist)</p>	<p>Conduct Burrowing Owl Surveys Surveys shall be conducted 30 days prior to construction activities</p>	<p>1. LACDRP/CDFG</p>
<p>Unless otherwise authorized by CDFG, a 500-foot buffer, within which no activity will be permissible, will be maintained between Project activities and nesting burrowing owls during the nesting season. This protected area will remain in effect until August 31 or at CDFG's discretion and based upon monitoring evidence, until the young owls are foraging independently. Results of the surveys and relocation efforts shall be provided to CDFG in the annual mitigation status report.</p>			<p>2. LACDRP/CDFG</p>
			<p>3. Prior to Construction Activities</p>
<p>LV 4.4-23. Thirty days prior to construction activities in grassland, scrub, chaparral, oak woodland, riverbank, and agriculture habitats, or other suitable habitat, a qualified biologist shall conduct a survey within the proposed construction disturbance zone and within 200 feet of the disturbance zone for San Diego black-tailed jackrabbit and San Diego desert woodrat.</p>	<p>Applicant (Project Biologist)</p>	<p>Conduct San Diego Black-tailed Jackrabbit and San Diego Desert Woodrat Surveys Surveys shall be conducted 30 days prior to construction activities</p>	<p>1. LACDRP/CDFG</p>
<p>If San Diego black-tailed jackrabbits are present, non-breeding rabbits shall be flushed from areas to be disturbed. Dens, depressions, nests, or burrows occupied by pups shall be flagged and ground-disturbing activities avoided within a minimum of 200 feet during the pup-rearing season (February 15 through July 1). This buffer may be reduced based on the location of the den upon consultation with CDFG. Occupied maternity dens, depressions, nests, or burrows shall be flagged for avoidance, and a biological monitor shall be present during construction. If unattended young are discovered, they shall be relocated to suitable habitat by a qualified biologist. The applicant shall document all San Diego black-tailed jackrabbit identified, avoided, or moved and provide a written report to CDFG within 72 hours. Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.</p>			<p>2. LACDRP/CDFG</p>

<p>If active San Diego desert woodrat nests (stick houses) are identified within the disturbance zone or within 100 feet of the disturbance zone, a fence shall be erected around the nest site adequate to provide the woodrat sufficient foraging habitat at the discretion of the qualified biologist in consultation with CDFG. Clearing and construction within the fenced area will be postponed or halted until young have left the nest. The biologist shall serve as a construction monitor during those periods when disturbance activities will occur near active nest areas to ensure that no inadvertent impacts to these nests will occur. If avoidance is not possible, the applicant will take the following sequential steps: (1) all understory vegetation will be cleared in the area immediately surrounding active nests followed by a period of one night without further disturbance to allow woodrats to vacate the nest, (2) each occupied nest will then be disturbed by a qualified wildlife biologist until all woodrats leave the nest and seek refuge off site, and</p>			<p>8.0 Mitigation/Monitoring Plan 3. Prior to Construction Activities in Suitable Habitat (grassland, scrub, chaparral, oak woodland, riverbank, and agriculture habitats, or other suitable habitat)</p>
<p>(3) the nest sticks shall be removed from the Project site and piled at the base of a nearby hardwood tree (preferably a coast live oak or California walnut). Relocated nests shall not be spaced closer than 100 feet apart, unless a qualified wildlife biologist has determined that a specific habitat can support a higher density of nests. The applicant shall document all woodrat nests moved and provide a written report to CDFG. All woodrat relocation shall be conducted by a qualified biologist in possession of a scientific collecting permit.</p>			
<p>LV 4.4-24. Thirty days prior to construction activities in grassland, scrub, chaparral, oak woodland, riverbank, and agriculture habitats, or other suitable habitat a qualified biologist shall conduct a survey within the proposed construction disturbance zone and within 200 feet of the disturbance zone for American badger.</p>	<p>Applicant (Project Biologist)</p>	<p>Conduct American Badger Surveys</p> <p>Surveys shall be conducted 30 days prior to construction activities</p>	<p>1. LACDRP/CDFG</p>
<p>If American badgers are present, occupied habitat shall be flagged and ground-disturbing activities avoided within 50 feet of the occupied den. Maternity dens shall be avoided during the pup-rearing season (February 15 through July 1) and a minimum 200 foot buffer established. This buffer may be reduced based on the location of the den upon consultation with CDFG. Maternity dens shall be flagged for avoidance, identified on construction maps, and a qualified biologist shall be present during construction. If avoidance of a non-maternity den is not feasible, badgers shall be relocated either by trapping or by slowly excavating the burrow (either by hand or mechanized equipment under the direct supervision of the biologist, removing no more than four inches at a time) before or after the rearing season (February 15 through July 1). Any relocation of badgers shall occur only after consultation with CDFG. A written report documenting the badger removal shall be provided to CDFG within 30 days of relocation.</p>			<p>2. LACDRP/CDFG</p>

<p>Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.</p>			<p>8.0 Mitigation/Monitoring Plan 3. Prior to Construction Activities in Suitable Habitat (grassland, scrub, chaparral, oak woodland, riverbank, and agriculture habitats, or other suitable habitat)</p>
<p>LV 4.4-25. No earlier than 30 days prior to the commencement of construction activities, a preconstruction survey shall be conducted by a qualified biologist to determine if active roosts of special-status bats are present on or within 300 feet of the Project disturbance boundaries. Should an active maternity roost be identified (the breeding season of native bat species in California generally occurs from April 1 through August 31), the roost shall not be disturbed and construction within 300 feet shall be postponed or halted, at the discretion of the biological monitor, until the roost is vacated and juveniles have fledged, as determined. Surveys shall include rocky outcrops, caves, structures, and large trees (particularly trees 12 inches in diameter or greater at 4.5 feet above grade with loose bark or other cavities). Trees and rocky outcrops shall be surveyed by a qualified bat biologist (<i>i.e.</i>, a biologist holding a CDFG collection permit and a Memorandum of Understanding with CDFG allowing the biologist to handle bats).</p>	<p>Applicant (Project Biologist)</p>	<p>Conduct Special-status Surveys</p> <p>Surveys shall be conducted not earlier than 30 days prior to construction activities</p>	<p>1. LACDRP/CDFG</p>
<p>If active maternity roosts or hibernacula are found, the rock outcrop or tree occupied by the roost shall be avoided (<i>i.e.</i>, not removed) by the Project. If avoidance of the maternity roost must occur, the bat biologist shall survey (through the use of radio telemetry or other CDFG approved methods) for nearby alternative maternity colony sites. If the bat biologist determines in consultation with and with the approval of CDFG that there are alternative roost sites used by the maternity colony and young are not present then no further action is required. If a maternity roost will be impacted by the Project, and no alternative maternity roosts are in use near the site, substitute roosting habitat for the maternity colony shall be provided on, or in close proximity to, the Project site no less than three months prior to the eviction of the colony. Large concrete walls (<i>e.g.</i>, on bridges) on south or southwestern slopes that are retrofitted with slots and cavities are an example of structures that may provide alternative potential roosting habitat appropriate for maternity colonies.</p>			<p>2. LACDRP/CDFG</p>

<p>Alternative roost sites must be of comparable size and proximal in location to the impacted colony. CDFG shall also be notified of any hibernacula or active nurseries within the construction zone. If non-breeding bat hibernacula are found in trees scheduled to be removed or in crevices in rock outcrops within the grading footprint, the individuals shall be safely evicted, under the direction of a qualified bat biologist, by opening the roosting area to allow airflow through the cavity or other means determined appropriate by the bat biologist (e.g., installation of one-way doors). In situations requiring one-way doors, a minimum of one week shall pass after doors are installed and temperatures should be sufficiently warm for bats to exit the roost because bats do not typically leave their roost daily during winter months in southern coastal California. This action should allow all bats to leave during the course of one week.</p>			<p>8.0 Mitigation/Monitoring Plan 3. Prior to Construction Activities in suitable habitat</p>
<p>Roosts that need to be removed in situations where the use of one-way doors is not necessary in the judgment of the qualified bat biologist in consultation with CDFG shall first be disturbed by various means at the direction of the bat biologist at dusk to allow bats to escape during the darker hours, and the roost tree shall be removed or the grading shall occur the next day (i.e., there shall be no less or more than one night between initial disturbance and the grading or tree removal). These actions should allow bats to leave during nighttime hours, thus increasing their chance of finding new roosts with a minimum of potential predation during daylight. If an active maternity roost is located on the Project site, and alternative roosting habitat is available, the demolition of the roost site must commence before maternity colonies form (i.e., prior to March 1) or after young are flying (i.e., after July 31) using the exclusion techniques described above.</p>			
<p>LV 4.4-26. Any <u>common</u> or special-status species bat day roost sites found by a qualified biologist during pre-construction surveys conducted per LV 4.4-25, to be directly (within project disturbance footprint) or indirectly (within 300 feet of project disturbance footprint) impacted are to be mitigated with creation of artificial roost sites. The Project applicant shall establish (an) alternative roost site(s) within suitable preserved open space located at an adequate distance from sources of human disturbance.</p>	<p>Applicant (Project Biologist)</p>	<p>Creation of Artificial Roost site</p>	<p>1. LACDRP/CDFG 2. LACDRP/CDFG 3. Prior to Construction Activities in suitable habitat</p>

8.0 Mitigation Monitoring Plan

<p>LV 4.4-27. The Project applicant will retain a qualified biologist to develop an Exotic Wildlife Species Control Plan and implement a control program for bullfrog, African clawed frog, and crayfish. The program will require the control of these species during construction within the River corridor and modified tributaries (bridges, diversions, bank stabilization, and drop structures). The Plan shall include a description of the species targeted for eradication, the methods of harvest that will be employed, the disposal methods, and the measures that would be employed to avoid impacts to sensitive wildlife (e.g. , stickleback, arroyo toad, nesting birds) during removal activities (i.e. , timing, avoidance of specific areas). Annual monitoring shall occur for the first five years after construction of Project facilities. Monitoring will be conducted within sentinel locations along the River Corridor SMA/SEA 23 and where the Project provides potential habitat for these species (e.g. , future ponds and water features).</p>	<p>Applicant (Project Biologist)</p>	<p>Preparation of an Exotic Wildlife Species Control Plan</p> <p>Annual monitoring for five (5) years</p>	<p>1. LACDRP/CFDG</p>
<p>Control shall be conducted within Project facilities where monitoring results indicate that exotic species have colonized an area. <u>After the first five years, a Natural Lands Management Organization (NLMO) will conduct monitoring and control exotic species in perpetuity.</u></p>			<p>2. LACDRP/CFDG</p> <p>3. Prior to Construction Activities in suitable habitat</p>
<p>LV 4.4-28. In order to reduce impacts to biological resources from grading and construction activities, all related activities will be conducted to facilitate the escape of animals to natural areas. Construction and grading activities will begin in disturbed areas in order to avoid stranding animals in isolated patches of vegetation. Trenches will be covered at night to prevent animals from falling into and being trapped in trenches.</p>	<p>Applicant (Project Biologist)</p>	<p>Field Verification</p>	<p>1. LACDRP/CFDG</p> <p>2. LACDRP/CFDG</p> <p>3. Prior to Grading and Construction Activities</p>
<p>LV 4.4-29. The permanent removal of CDFG jurisdictional riparian vegetation communities (including arrow weed scrub, cottonwood-willow riparian forest, Mexican elderberry scrub, coastal and valley freshwater marsh, big sagebrush scrub, mulefat scrub, southern coast live oak riparian forest, southern willow scrub, and river wash) habitats in the river and tributaries shall be replaced by creating riparian habitats <u>at a ratio of 1:1</u> of similar functions and values (see LV 4.4-31 on the Project site, or as allowed under LV 4.4-37. Riparian habitat meeting success criteria (see LV 4.4-34) two years in advance of the removal or riparian habitat cannot meet the success criteria two years in advance of the project, the ratios listed below in Table 4.4-12 will apply.The permanent removal of riparian vegetation communities (including arrow weed scrub, cottonwood-willow riparian forest, Mexican elderberry scrub, coastal and valley freshwater marsh, big sagebrush scrub, mulefat scrub, southern coast live oak riparian forest, southern willow scrub, and river wash) shall be replaced by creating riparian vegetation communities of similar functions and services (see LV 4.4-31), or as allowed under LV 4.4-38 in accordance with the criteria set for the in LV 4.4-1. The permanent removal of CDFG jurisdictional riparian habitats in the river and tributaries shall be replaced by creating riparian habitats of similar functions and values (see LV 4.4-31 on the Project site, or as allowed under LV 4.4-37. Riparian habitat meeting success criteria (see LV 4.4-34) two years in advance of the removal or riparian habitat cannot meet the success criteria two years in advance of the project, the ratios listed below in Table 4.4-12 will apply.</p>	<p>Applicant (Project Biologist)</p>	<p>Creation of Vegetation Sites/Revegetation Plan</p>	<p>1. LACDRP/CFDG/ACOE</p> <p>2. LACDRP/CFDG/ACOE</p> <p>3. Concurrent with Submittal of Sub-Notification Letters and Detailed Wetland Mitigation Plans</p>
<p>LV 4.4-29 TABLE Impact Sciences, Inc. 32.92A</p>	<p>8.0-90 90</p>	<p>Landmark</p>	<p>Village Revised Final EIR January 2010</p>

8.0 Mitigation Monitoring Plan			
<p>LV 4.4-30. Creation of new vegetation communities and restoration of impacted vegetation communities shall occur at suitable sites in or adjacent to the watercourses <u>jurisdictional areas</u> or in areas where bank stabilization would occur. <u>Locations where the excavation of uplands for bank protection/stabilization results in creation of new, unvegetated riverbed or other disturbance shall receive the highest level of priority for vegetation community restoration.</u> The highest priority vegetation community restoration sites are to be new riverbed and tributary areas created, or disturbed sites impacted, during the excavation of uplands for bank protection/stabilization activities. Restoration sites may also occur at locations outside the riverbed where there are appropriate hydrologic conditions to create a self-sustaining riparian vegetation community and where upland and riparian vegetation community values are absent or very low. All sites shall contain suitable hydrological conditions and surrounding land uses to ensure a self-sustaining functioning riparian vegetation community. Candidate restoration sites shall be described in the annual mitigation status report (LV 4.4-41).</p>	Applicant (Project Biologist)	<p>Creation of Vegetation Sites/Revegetation Plans</p> <p>Preparation of Annual Mitigation Status Reports</p>	1. LACDRP/CDFG/ACOE
<p>Sites will be approved when the detailed wetlands mitigation plans are submitted to the Corps and CDFG as part of the sub-notification letters submitted for individual projects. Status of the sites will be addressed as part of the annual mitigation status report and mitigation accounting form agency review. Each revegetation plan will include acreages, maps, and site specific descriptions of the proposed <u>mitigation revegetation</u> site, including analysis of soils, hydrologic suitability, and present and future adjacent land uses.</p>			<p>2. LACDRP/CDFG/ACOE</p> <p>3. Concurrent with Submittal of Sub-Notification Letters and Detailed Wetland Mitigation Plans</p>
<p>LV 4.4-31 Replacement vegetation communities shall be designed to replace the functions and values of the vegetation communities being removed. The replacement vegetation communities shall have similar dominant trees and understory shrubs and herbs (excluding exotic species) to those of the affected example of recommended plant species for the River Corridor SMA/SEA 23 and tributaries). In addition, the replacement vegetation communities shall be designed to replicate the density and structure of the affected vegetation communities once the replacement vegetation communities have met the mitigation success criteria</p>	Applicant (Project Biologist)	<p>Creation of Vegetation Sites/Revegetation Plans</p> <p>Preparation of Annual Mitigation</p>	<p>1. LACDRP/CDFG/ACOE</p> <p>2. LACDRP/CDFG/ACOE</p> <p>3. Concurrent with Submittal of Sub-Notification Letters and Detailed Wetland Mitigation Plans</p>
<p>LV 4.4-32 Average plant spacing shall be determined based on an analysis of vegetation communities to be replaced. The applicant shall develop plant spacing specifications for all riparian vegetation communities to be restored. Plant spacing specifications shall be reviewed and approved by the Corps and CDFG when restoration plans are submitted to the agencies as part of the sub-notification letters submitted to the Corps and CDFG for individual projects or as part of the annual mitigation.</p>	Applicant (Project Biologist)	<p>Creation of Vegetation Sites/Revegetation Plans</p> <p>Preparation of Annual</p>	<p>1. LACDRP/CDFG/ACOE</p> <p>2. LACDRP/CDFG/ACOE</p> <p>3. Concurrent with Submittal of Sub-Notification Letters and Detailed Wetland Mitigation Plans</p>

8.0 Mitigation Monitoring Plan

<p>LV 4.4-33. If at any time prior to Agency approval of the restoration area, the site is subject to an act of God (flood, fires, or drought), the applicant shall be responsible for replanting the damaged area. The site will be subject to the same success criteria as provided for LV 4.4-34. Should a second act of God occur prior to Agency approval of the restoration area, the applicant shall coordinate with the Agencies to develop an alternative restoration strategy(ies) to meet success requirements. This may include restoration elsewhere in the River corridor or tributaries.</p>	<p>Applicant (Project Biologist)</p>	<p>Creation of Vegetation Sites/Revegetation Plans Preparation of Annual</p>	<p>1. CDFG/ACOE 2. CDFG/ACOE 3. Concurrent with Submittal of Sub-Notification Letters and Detailed Wetland Mitigation Plans</p>
<p>LV 4.4-34. The revegetation site will be considered "complete" upon meeting all of the following success criteria. In a sub-notification letter, the applicant may request modification of success criteria on a project by project basis. Acceptance of such request will be at the discretion of CDFG and the Corps.</p> <p>1. Regardless of the date of initial planting, any restoration site must have been without active manipulation by irrigation, planting, or seeding for a minimum of three years prior to Agency consideration of successful completion.</p> <p>2. The percent cover and species richness of native vegetation shall be evaluated based on local reference sites established by CDFG and the Corps for the plant communities in the impacted areas.</p> <p>3. Native shrubs and trees shall have at least 80 percent survivorship after two years beyond the beginning of the success evaluation start date. This may include natural recruitment.</p> <p>4. Non-native species cover will be no more than 5 percent absolute cover through the term of the restoration.</p>	<p>Applicant (Project Biologist)</p>	<p>Field Verification</p>	<p>1. CDFG/ACOE 2. CDFG/ACOE</p>
<p>5. Giant reed (<i>Arundo donax</i>), tamarisk (<i>Tamarix ramosissima</i>), perennial pepperweed (<i>Lepidium latifolium</i>), tree of heaven (<i>Ailanthus altissimus</i>), pampas grass (<i>Cortaderia selloana</i>) and any species listed on the California State Agricultural list, or Cal-IPC list of noxious weeds will not be present on the revegetation site as of the date of completion approval.</p> <p>6. Using the HARC assessment methodology, the compensatory mitigation site shall meet or exceed the baseline functional scores of the impact area in Corps' jurisdictional waters, as described in the Compensatory Mitigation Plan for Waters of the United States. If the compensatory mitigation site cannot meet or exceed the baseline functional score of the impact area in jurisdictional waters of the United States, additional mitigation area would be required to compensate for the functional loss.</p>			<p>3. Completion of Revegetation Site</p>
<p>LV 4.4-35. Temporary irrigation shall be installed as necessary for plant establishment. Irrigation shall continue as needed until the restoration site becomes self sustaining regarding survivorship and growth. Irrigation shall be terminated in the fall to provide the least stress to plants.</p>	<p>Applicant (Project Biologist)</p>	<p>Field Verification</p>	<p>1. LACDRP/CDFG/ACOE 2. LACDRP/CDFG/ACOE 3. As-needed basis</p>

8.0 Mitigation Monitoring Plan

<p>LV 4.4-36. <u>In areas where</u> invasive exotic plant species <u>control is authorized by CDFG</u> within the Upper Santa Clara River Sub-Watershed for a portion of the Santa Clara River mitigation required under LV 4.4-29. The applicant may perform this work or contribute “in-lieu of other riparian habitat mitigation (LV 4.4-29), fees” to the Upper Santa Clara River Arundo/Tamarisk Removal Program to perform this work, if available. The weed control sites shall be selected in a coordinated, logical manner to ensure that giant reed and other invasive weeds are controlled to improve and expand wildlife and endangered species habitat; reduce flooding, erosion, and fire hazards; improve water quality; and potentially increase stream flow/water quantity in the project watercourses. <u>Removal removal</u> areas shall be kept free of exotic plant species for 5 years after initial treatment. In areas where extensive exotic removal occurs, revegetation with native plants or natural recruitment shall be documented.</p>	<p>Applicant (Project Biologist)</p>	<p>Creation of Vegetation Sites/Revegetation on Plan or Contribute to “In-Lieu Fees” to the Upper Santa Clara River Arundo/Tamarisk Removal</p>	<p>1. CDFG/ACOE 2. CDFG/ACOE 3. Concurrent with Submittal of Sub-Notification Letters and Detailed Wetland Mitigation Plans</p>
<p>LV 4.4-37. The exotics control program may utilize methods and procedures in accordance with the provisions in the Upper Santa Clara River Watershed Arundo/Tamarisk Removal Plan Final Environmental Impact Report, dated February 2006, or the applicant may propose alternative methods and procedures for Corps and CDFG review and approval pursuant to a sub-notification letter or <u>annual mitigation status report submittal</u>. <u>Exotic plant species control will be credited at an acreage equivalent to the percentage of exotic vegetation at the restoration site. For example: a 10-acre site occupied by 10% exotic species will be credited withfor one acre of mitigation when placed under the exotics control program.</u> . Exotic plant species control will be credited for 1 acre of mitigation.</p>	<p>Applicant (Project Biologist)</p>	<p>Preparation of an Exotic Control Program</p>	<p>1. CDFG/ACOE 2. CDFG/ACOE 3. Concurrent with Submittal of Sub-Notification Letters</p>
<p>LV 4.4-38. All native riparian trees with a 3-inch diameter at breast height (dbh) or greater in temporary construction areas shall be replaced using 1- or 5-gallon container plants, containered trees, or pole cuttings in the temporary construction areas in the winter following the construction disturbance. The growth and survival of the replacement trees shall meet the performance standards specified in LV 4.4-34. In addition, the growth and survival of the planted trees shall be monitored until they meet the self-sustaining success criteria in accordance with the methods and reporting procedures specified in LV 4.4-34, LV 4.4-40, and LV 4.4-41.</p>	<p>Applicant (Project Biologist)</p>	<p>Field Verification</p>	<p>1. CDFG/ACOE 2. CDFG/ACOE 3. Completion of Revegetation Site</p>

8.0 Mitigation Monitoring Plan

<p>LV 4.4-39. Vegetation communities temporarily impacted by the proposed project shall be revegetated as described in LV 4.4-29. Large trunks of removed trees may also remain on site to provide habitat for invertebrates, reptiles, and small mammals or may be anchored within the project site for erosion control. To facilitate restoration, mulch, or native topsoil (the top 6- to 12-inch deep layer containing organic material), may be salvaged from the work area prior to construction. Following construction, salvaged topsoil shall be returned to the work area and placed in the restoration site. Within one year, the project biologist will evaluate the progress of restoration activities in the temporary impact areas to determine if natural recruitment has been sufficient for the site to reach performance goals. In the event that native plant recruitment is determined by the project biologist to be inadequate for successful habitat establishment, the site shall be revegetated in accordance with the methods designed for permanent impacts (i.e., seeding, container plants, and/or a</p>	<p>Applicant (Project Biologist)</p>	<p>Creation of Vegetation Sites/Revegetation Plan Field Verification</p>	<p>1. CDFG/ACOE</p>
<p>temporary irrigation system may be recommended). This will help ensure the success of temporary mitigation areas. The applicant shall restore the temporary construction area per the success criteria and ratios described in LV 4.4-1, LV 4.4-29, and LV 4.4-34. Annual monitoring reports on the status of the recovery or temporarily impacted areas shall be submitted to the Corps and CDFG as part of the annual mitigation status report (LV 4.4-40 and LV 4.4-41).</p>			<p>2. CDFG/ACOE 3. Concurrent with Submittal of Sub-Notification Letters and Detailed Wetland Mitigation Plans</p>
<p>LV 4.4-40. To provide an accurate and reliable accounting system for mitigation, the applicant shall file a mitigation accounting form annually with the Corps and CDFG by April 1.</p>			<p>Applicant (Project Biologist)</p>
<p>LV 4.4-41. An annual mitigation status report shall be submitted to the Corps and CDFG by April 1 of each year until satisfaction of success criteria identified in LV 4.4-34. This report shall include any required plans for plant spacing, locations of candidate restoration and weed control sites or proposed "in-lieu fees," restoration methods, and vegetation community restoration performance standards. For active vegetation community creation sites, the report shall include the survival, percent cover, and height of planted species; the number by species of plants replaced; an overview of the revegetation effort and its success in meeting performance criteria; the method used to assess these parameters; and photographs. For active exotics control sites, the report shall include an assessment of weed control; a description of the relative cover of native vegetation, bare areas, and exotic vegetation; an accounting of colonization by native plants; and photographs.</p>	<p>Applicant (Project Biologist)</p>	<p>Annual Mitigation Status Report</p>	<p>1. CDFG/ACOE</p>
<p>The report shall also include the mitigation accounting form (see LV 4.4-40), which outlines accounting information related to species planted or exotics control and mitigation credit remaining. The annual mitigation and monitoring report shall document the current functional capacity of the compensatory mitigation site using the HARC assessment methodology, as well as documenting the baseline functional scores of the impact site in jurisdictional waters of the United States.</p>			<p>2. CDFG/ACOE 3. April 1 of each year until success criterion have been met</p>

8.0 Mitigation Monitoring Plan

<p>LV 4.4-42. <u>Prior to the construction of adjacent developments, signs will be placed along the roads indicating potential wildlife crossings where mountain lions and mule deer are known to cross in consultation with CDFG. Road undercrossings will be built in accordance with accepted design criteria to allow the passage of mountain lions and mule deer. The applicant shall prepare a Wildlife Movement Corridor Plan that specifically addresses wildlife movement corridors at San Martinez Grande, Chiquito Canyon, and Castaic Creek, which shall be monitored for one year prior to construction of the SR-126 widenings. The Plan shall address current movement that is occurring, the methods that will be implemented to provide for passage, including lighting, fencing, vegetation planting, the installation of bubblers to encourage wildlife usage, and the size of the passage. The applicant shall install motion cameras at these locations in consultation with CDFG and monitor these passages for a period of two years subsequent to constructing improvements. A report of the wildlife documented to utilize these crossings shall be provided to CDFG annually. In addition, the Salt Creek crossing west of the Project area will be enhanced prior to initiation of construction in Long Canyon (southern portion of the Homestead Village). This crossing will be monitored for one year at the initiation of RMDP development, for two years at the time the crossing is enhanced, and then for three years after Project build-out. Prior to the construction of adjacent developments, signs will be placed along the roads indicating potential wildlife crossings where mountain lions and mule deer are likely to cross. (This mitigation measure has been identified to offset cumulative impacts to wildlife habitat (including coastal scrub). Implementation of the measure is linked directly to construction activities related to the widening of SR-126 and/or the southern portion of the Homestead Village area, but is not required for implementation with the Landmark Village tract map.)</u></p>	<p>Applicant (Project Biologist)</p>	<p>Field Verification</p>	<p>1. LACDRP/CDFG 2. LACDRP/CDFG 3. Prior to Construction of Adjacent Developments</p>
<p>LV 4.4-43. Development areas shall have dust control measures implemented and maintained to prevent dust from impacting vegetation communities and special-status plant and aquatic wildlife species. Dust control shall comply with SCAQMD Rule 403d (SCAQMD 2005). Where construction activities occur within 100 feet of known special-status plant species locations, chemical dust suppression shall not be utilized. Where determined necessary by a qualified biologist, a screening fence (<i>i.e.</i>, a six-foot-high chain link fence with green fabric up to a height of 5 feet) shall be installed to protect special-status species locations.</p>	<p>Applicant (Project Biologist)</p>	<p>Field Verification</p>	<p>1. LACDRP/CDFG 2. LACDRP/CDFG 3. During Grading Activities</p>
<p>LV 4.4-44. Plant palettes proposed for use on landscaped slopes, street medians, park sites, and other public landscaped and FMZ areas within 100-200 feet of native vegetation communities shall be reviewed by a qualified restoration specialist to ensure that the proposed landscape plants will not naturalize and require maintenance or cause vegetation community degradation in the open space areas (River Corridor SMA/SEA 23, High Country SMA/SEA 20, Salt Creek area, and natural portions of the Open Area). Container plants to be installed within public areas within 200 feet of the open space areas shall be inspected by a qualified restoration specialist for the presence of disease, weeds, and pests, including Argentine ants. Plants with pests, weeds, or diseases shall be rejected. In addition, landscape plants within 100-200 feet of native vegetation communities shall not be on the Cal-IPC California Invasive Plant Inventory (most recent version) or on the list of Invasive Ornamental Plants listed in Appendix B of the SCP.</p>	<p>Applicant (Landscape Architect)</p>	<p>Review and approval of Landscape Plans by Qualified Restoration Specialist</p>	<p>1. LACDRP</p>

<p>The current Cal-IPC list can be obtained from the Cal-IPC website (http://www.cal-ipc.org/ip/inventory/index.php). Landscape plans will include a plant palette composed of native or non-native, non-invasive species that do not require high irrigation rates. Except as required for fuel modification, irrigation of perimeter landscaping shall be limited to temporary irrigation (i.e., until plants become established).</p>			<p>8.0 Mitigation/Monitoring Plan 2. LACDRP</p>
			<p>3. Prior to Approval of Landscape Plans</p>
<p>LV 4.4-45. Waste and recycling receptacles that discourage foraging by wildlife species adapted to urban environments shall be installed in common areas and parks throughout the Landmark Village site.</p>	<p>Landmark Village Homeowners Association</p>	<p>Field Verification</p>	<p>1. LACDRP 2. LACDRP 3. Prior to Issuance of Occupancy Permits</p>
<p>LV 4.4-46. An Integrated Pest Management (IPM) plan that addresses the use of pesticides (including rodenticides and insecticides) on site will be prepared prior to the issuance of building permits for the initial tract map. <u>The IPM will implement appropriate Best Management Practices to avoid and minimize adverse effects on the natural environment, including vegetation communities, special-status species, species without special status, and associated habitats, including prey and food resources (e.g., insects, small mammals, seeds). Potential management practices include cultural (e.g., planting pest-free stock plants), mechanical (e.g., weeding, trapping), and biological controls (e.g., natural predators or competitors of pest species, insect growth regulators, natural pheromones, or biopesticides), and the judicious use of chemical controls, as appropriate (e.g., targeted spraying versus broadcast applications). The IPM will establish management thresholds (i.e., not all incidences of a pest require management); prescribe monitoring to determine when management thresholds have been exceeded; and identify the most appropriate and efficient control method that avoids and minimizes risks to natural resources.</u> Preparation of the covenants, conditions, and restrictions (CC&Rs) for each tract map shall include language that prohibits the use of anticoagulant rodenticides in the Project site</p>	<p>Applicant</p>	<p>Review of Integrated Pest Management Plan and CC&Rs</p>	<p>1. LACDRP 2. LACDRP 3. Prior to Issuance of Building Permits</p>
<p>LV 4.4-47. The applicant or the Natural Lands Management Organization (NLMO) shall fund or otherwise coordinate the regular removal of trash and debris from riparian habitats on or adjacent to the project site. The removal of trash shall be conducted in a manner as to not disturb sensitive habitats</p>	<p>Natural Lands Management Organization (NLMO)</p>	<p>Field Verification or payment of fees</p>	<p>1. LACDRP 2. LACDRP 3. Ongoing</p>
<p>LV 4.4-48. Each tract map Home Owners' Association shall supply educational information to future residents regarding pets, wildlife, and open space areas. The material shall discuss the presence of native animals (e.g., coyote, bobcat, mountain lion), indicate that those native animals could prey on pets, indicate that no actions shall be taken against native animals should they prey on pets allowed outdoors, and indicate that pets must be leashed while using the designated trail system and/or in any areas within or adjacent to open space. Control of stray and feral cats and dogs will be conducted in open space areas on an as-needed basis by the NLMO(s) or the Newhall Ranch JPA managing the River Corridor SMA/SEA 23, High Country SMA/SEA 20, or Salt Creek area or by the HOAs managing the Open Areas. Feral cats and dogs may be trapped and deposited with the local Society for the Prevention of Cruelty to Animals or the Los Angeles County Department of Animal Control.</p>	<p>Landmark Village Homeowners Association</p>	<p>Supply written material regarding the presence of native animals</p>	<p>1. LACDRP/CDFG 2. LACDRP/CDFG 3. Ongoing</p>

8.0 Mitigation Monitoring Plan

<p>LV 4.4-49. Permanent fencing shall be installed along all River Corridor SMA/SEA 23 trails adjacent to the Santa Clara River, or other sensitive resources, in order to minimize impacts associated with increased human presence on protected vegetation communities and special-status plant and wildlife species. The fencing will be split rail to avoid inhibiting wildlife movement. Viewing platforms will be located in land covers currently mapped as agriculture, disturbed land, or developed land.</p>	<p>Applicant</p>	<p>Field Verification</p>	<p>1. LACDRP 2. LACDRP 3. During Construction of the Trail</p>
<p>LV 4.4-50. A cowbird trapping program shall be implemented once vegetation clearing begins and maintained throughout the construction, maintenance, and monitoring period of the riparian restoration sites. A minimum of five traps shall be utilized, with at least one trap adjacent to the project site and one or two traps located at feeding areas or other CDFG-approved location. The trapping contractor may consult with CDFG to request modification of the trap location(s). CDFG must approve any relocation of the traps. Traps will be maintained beginning each year on April 1 and concluding on/or about November 1 (may conclude earlier, depending upon weather conditions and results of capture). The trapping contractor may also consult CDFG on a modified, CDFG-approved trapping schedule modification. The applicant shall follow CDFG and USFWS protocol. In the event that trapping is terminated after the first few years, subsequent phases of the RMDP development will require initiation of trapping surveys to determine whether re-establishment of the trapping program is necessary.</p>	<p>Applicant (Project Biologist)</p>	<p>Preparation and Approval of Cow-Bird Trapping Program Trapping Surveys as necessary</p>	<p>1. LACDRP/CDFG 2. LACDRP/CDFG 3. Prior to Issuance of Grading Permits</p>
<p>LV 4.4-51. <u>Upon initiating landscaping within</u> Following the completion and occupancy of a development area, quarterly monitoring shall be initiated for Argentine ants along the urban–open space interface at sentinel locations where invasions could occur (e.g., where moist microhabitats that attract Argentine ants may be created). A qualified biologist shall determine the monitoring locations. Ant pitfall traps will be placed in these sentinel locations and operated on a quarterly basis to detect invasion by Argentine ants. If Argentine ants are detected during monitoring, direct control measures will be implemented immediately to help prevent the invasion from worsening. These direct controls may include but are not limited to nest/mound insecticide treatment, or available natural control methods being developed. A general reconnaissance of the infested area would also be conducted to identify and correct the possible source of the invasion, such as uncontrolled urban runoff, leaking pipes, or collected water. Monitoring and control of Argentine ants would occur for a 5-year period. <u>After the first 5 years, the NLMO or other entity will be responsible for controlling Argentine ants.</u></p>	<p>Applicant (Project Biologist)</p>	<p>Quarterly Monitoring for Argentine Ants</p>	<p>1. CDFG 2. CDFG 3. Following the Issuance of Occupancy Permits for 5-years</p>

8.0 Mitigation Monitoring Plan

<p>LV 4.4-52. Thirty days prior to construction activities, a qualified biologist shall conduct a preconstruction survey for ringtail. The survey area shall include suitable riparian and woodland habitat (southern coast live oak riparian forest, southern cottonwood-willow riparian forest, southern willow scrub, coast live oak woodland, valley oak woodland, and mixed oak woodland) within the construction disturbance zone and a 300-foot buffer around the construction site. Should the ringtail be observed in the breeding and rearing period of February 1 through August 31, no construction-related activities shall occur within 300 feet of the occupied area for the period of February 1 through August 31 or until the ringtail has been determined by a qualified biologist (in consultation with CDFG) to no longer occupy areas within 300 feet of the construction zone and/or that construction activities would not adversely affect the successful rearing of young.</p>	<p>Applicant (Project Biologist)</p>	<p>Preconstruction survey for Ringtail Documentation shall be reported to CDFG</p>	<p>1. LACDRP/CDFG</p>
<p>If the ringtail is observed within the construction disturbance zone or in the 300-foot buffer around the construction site in the nonbreeding/rearing period of September 1 through January 31, and avoidance is not possible, denning ringtail shall be safely evicted under the direction of a qualified biologist (as determined by a Memorandum of Understanding with CDFG). All activities that involve the ringtail shall be documented and reported to CDFG.</p>			<p>2. LACDRP/CDFG</p>
			<p>3. Prior to Construction Activities</p>
<p>LV 4.4-53. Any southern California black walnut and mainland cherry trees or shrubs outside riparian areas greater than one inch dbh shall be replaced in the ratio of at least 2:1. Multi-trunk trees/shrub dbh shall be calculated based on combined trunk dbh. Mitigation shall be deemed complete when each replacement tree attains at least one inch in diameter one foot above the base.</p>	<p>Applicant (Project Biologist)</p>	<p>Field Verification</p>	<p>1. LACDRP</p>
			<p>2. LACDRP</p>
			<p>3. On-going</p>
<p>LV 4.4-54. During any stream diversion or culvert installation activity, a qualified biologist(s) shall be present and shall patrol the areas within, upstream, and downstream of the work area. The biologists shall inspect the diversion and inspect for stranded fish or other aquatic organisms. Under no circumstances shall the unarmored threespine stickleback be collected or relocated, unless USFWS personnel or their agents implement this measure. Any event involving stranded fish shall be recorded and reported to CDFG and USFWS within 24 hours.</p>	<p>Applicant (Project Biologist)</p>	<p>Field Verification</p>	<p>1. CDFG/USFWS</p>
			<p>2. CDFG/USFWS</p>
			<p>3. During to Stream Diversion of Culvert Installation Activity</p>

8.0 Mitigation Monitoring Plan

<p>LV 4.4-55. Conduct focused surveys for California red-legged frogs. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities, all construction sites and access roads within the riverbed as well as all riverbed areas within 1,000 feet of construction sites and access roads shall be surveyed at the appropriate season for California red-legged frogs. The applicant shall contract with a qualified biologist to conduct focused surveys for California red-legged frogs. If detected in or adjacent to the Project area, no work will be authorized within 500 feet of occupied habitat until the applicant provides concurrence from the USFWS to CDFG and Corps. If present, the applicant shall implement measures required by the USFWS Biological Opinion for California red-legged frog that either supplement or supercede these measures. If present, the applicant shall develop and implement a monitoring plan that includes the following measures in consultation with the USFWS and CDFG.</p>	<p>Applicant (Project Biologist)</p>	<p>Conduct Focused Surveys for California Red-legged Frogs</p>	<p>1. CDFG/USFWS</p>
<p>1. The applicant shall retain a qualified biologist with demonstrated expertise with California red-legged frogs to monitor all construction activities in potential red-legged frog habitat and assist the applicant in the implementation of the monitoring program. This person will be approved by the USFWS prior to the onset of ground-disturbing activities. This biologist will be referred to as the authorized biologist hereafter. The authorized biologist will be present during all activities immediately adjacent to or within habitat that supports populations of California red-legged frogs.</p> <p>2. Prior to the onset of construction activities, the applicant shall provide all personnel who will be present on work areas within or adjacent to the Project area the following information:</p> <p>a. A detailed description of the California red-legged frogs, including color photographs;</p>		<p>2. CDFG/USFWS</p>	
<p>b. The protection the California red-legged frog receives under the Endangered Species Act and possible legal action that may be incurred for violation of the Act;</p> <p>c. The protective measures being implemented to conserve the California red-legged frogs and other species during construction activities associated with the proposed Project; and</p> <p>d. A point of contact if California red-legged frogs are observed.</p> <p>3. All trash that may attract predators of the California red-legged frogs will be removed from work sites or completely secured at the end of each work day.</p>		<p>3. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities</p>	
<p>4. Prior to the onset of any construction activities, the applicant shall meet on site with staff from the USFWS and the authorized biologist. The applicant shall provide information on the general location of construction activities within habitat of the California red-legged frogs and the actions taken to reduce impacts to this species. Because California red-legged frogs may occur in various locations during different seasons of the year, the applicant, USFWS, and authorized biologist will, at this preliminary meeting, determine the seasons when specific construction activities would have the least adverse effect on California red-legged frogs. The goal of this effort is to reduce the level of mortality of California red-legged frogs during construction.</p>			

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<p>5. Work areas will be fenced in a manner that prevents equipment and vehicles from straying from the designated work area into adjacent habitat. The authorized biologist will assist in determining the boundaries of the area to be fenced in consultation with the USFWS/CDFG. All workers will be advised that equipment and vehicles must remain within the fenced work areas.</p> <p>6. The authorized biologist will direct the installation of the fence and conduct a minimum of three nocturnal surveys to move any California red-legged frogs from within the fenced area to suitable habitat outside of the fence. If California red-legged frogs are observed on the final survey or during subsequent checks, the authorized biologist will conduct additional nocturnal surveys if he or she determines that they are necessary in concurrence with the USFWS/CDFG.</p> <p>7. Fencing to exclude California red-legged frogs will be at least 24 inches in height.</p> <p>8. The type of fencing must be approved by the authorized biologist and the USFWS/CDFG.</p>			
<p>9. Construction activities that may occur immediately adjacent to breeding pools or other areas where large numbers of California red-legged frogs may congregate will be conducted during times of the year (fall/winter) when individuals have dispersed from these areas. The authorized biologist will assist the applicant in scheduling its work activities accordingly.</p> <p>10. If California red-legged frogs are found within an area that has been fenced to exclude California red-legged frogs, activities will cease until the authorized biologist moves the California red-legged frog(s).</p> <p>11. If California red-legged frogs are found in a construction area where fencing was deemed unnecessary, work will cease until the authorized biologist moves the California red-legged frogs. The authorized biologist in consultation with USFWS/CDFG will then determine whether additional surveys or fencing are needed. Work may resume while this determination is being made, if deemed appropriate by the authorized biologist and USFWS.</p>			
<p>12. Any California red-legged frogs found during clearance surveys or otherwise removed from work areas will be placed in nearby suitable, undisturbed habitat. The authorized biologist will determine the best location for their release, based on the condition of the vegetation, access to deep perennial pools, soil, and other habitat features and the proximity to human activities. Clearance surveys shall occur on a daily basis in the work area.</p> <p>13. The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed.</p> <p>14. Staging areas for all construction activities will be located on previously disturbed upland areas, if possible, designated for this purpose. All staging areas will be fenced.</p> <p>15. To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force (DAPTF 2009) will be followed at all times.</p>			

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<p><u>LV 4.4-56 Bridge and culvert designs, where practicable, shall provide roosting habitat for bats. A qualified biologist shall work with the project engineer in identifying and incorporating structures into the design that provide suitable roosting habitat for bat species occurring in the project area. The final design of the roosting structures would be chosen in consultation with CDFG.</u></p>	<p>Applicant (Project Biologist)/Project Engineer</p>	<p>Review of Design Plans</p>	<p>1. CDFG</p>
			<p>2. CDFG</p>
<p><u>LV 4.4-57 The 1,518 acre Salt Creek area shall be offered for dedication to the public pursuant to Condition 42 of the approved Specific Plan using a "rough step" land dedication approach. Irrevocable offers of dedication will be provided to CDFG for identified impact offsets in accordance with the Plan (LV 4.4-1). The Salt Creek area includes approximately 629 acres of coastal scrub communities within both Ventura and Los Angeles counties. This land dedication shall be managed in conjunction with the 4,205 acre High Country SMA (containing 1,314 acres of coastal scrub communities).</u> <u>a. To facilitate wildlife movement between the north side of SR-126 and the Salt Creek area, enhancements will be made to the existing agricultural undercrossing and to the agricultural land at the base of Salt Creek as discussed in LV 4.4-42. A Wildlife Movement Enhancement Plan shall be submitted to the Corps and CDFG for approval prior to implementation. The plan shall include at the minimum the following:</u></p>	<p>Applicant (Project Biologist)</p>	<p>Field Verification</p>	<p>1. CDFG/USFWS</p>
<p><u>i. A portion of the agricultural field on the north side of SR-126 will be dedicated to wildlife movement. Trees and/or scrubs will be planted in the agricultural field to guide wildlife into the existing undercrossing.</u> <u>ii. On the south side of SR-126 two rows of trees/scrubs will be planted to guide wildlife to the Santa Clara River.</u> <u>iii. A wildlife corridor will be created through the agricultural fields at the base of Salt Creek Canyon. (The second part of this mitigation measure (a.i. through a.iii.) has been identified to offset cumulative impacts to wildlife habitat, including coastal scrub). Implementation of the measure is linked directly to construction activities related to the widening of SR-126 and/or the southern portion of the Homestead Village area but is not required for implementation with the Mission Village tract map.)</u></p>			
			<p>2. CDFG/USFWS</p>
			<p>3. During Construction Activity</p>

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<p><u>LV 4.4-58 The Newhall Ranch JPA will have overall responsibility for recreation within and conservation of the High Country. The Newhall Ranch JPA and NLMO shall develop and implement a conservation education and citizen awareness program for the High Country SMA informing the public of the special status resources present within the High Country SMA and providing information on common threats posed by the presence of people and pets to those resources. The NLMO shall install trailhead and trail signage indicating the High Country SMA is a biological conservation area and advising that people and their animals must stay on existing trails at all times and that violators may be cited. The NLMO shall provide quarterly maintenance patrols to remove litter and monitor trail expansion and fire hazards within the High Country SMA, funded by the JPA.</u></p>	<p>Newhall Ranch JPA and NLMO</p>	<p>Field Verification</p>	<p>1. Newhall Ranch JPA and NLMO</p>
			<p>2. Newhall Ranch JPA and NLMO</p>
			<p>3. During Construction Activity</p>
<p><u>LV 4.4-59 Supplemental restoration of coastal scrub shall be conducted as an adaptive management measure pursuant to LV 4.4-2. Eight areas were identified in the Draft Newhall Ranch Mitigation Feasibility Report in the High Country SMA, Salt Creek area, and River Corridor SMA (Dudek 2007A) for coastal scrub restoration. In the event that coastal scrub restoration is required pursuant to LV 4.4-2, the applicant shall develop a Coastal Scrub Restoration Plan, subject to the approval of CDFG. The plan shall specify, at a minimum, the following: (1) the location of mitigation sites to be selected from suitable mitigation land in the High Country and Salt Creek areas identified in the Feasibility Study; (2) a description of "target" vegetation (native shrubland) to include estimated cover and abundance of native shrubs; (3) site preparation measures to include topsoil treatment, soil decompaction, erosion control, temporary irrigation systems, or other measures as appropriate;</u></p>	<p>Applicant/Project Biologist</p>	<p>Annual Mitigation Status Report</p>	<p>1. CDFG</p>

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<p>(4) methods for the removal of non native plants (e.g., mowing, weeding, raking, herbicide application, or burning); (5) the source of all plant propagules (e.g., seed, potted nursery stock, etc. collected from within five miles of the restoration site), the quantity and species of seed or potted stock of all plants to be introduced or planted into the restoration/enhancement areas; (6) a schedule and action plan to maintain and monitor the enhancement/restoration areas, to include at minimum, qualitative annual monitoring for revegetation success and site degradation due to erosion, trespass, or animal damage for a period no less than two years; (7) as needed where sites are near trails or other access points, measures such as fencing, signage, or security patrols to exclude unauthorized entry into the restoration/enhancement areas; and (8) contingency measures such as replanting, weed control, or erosion control to be implemented if habitat improvement/restoration efforts are not successful.</p> <p>Habitat restoration/enhancement will be judged successful when: (1) percent cover and species richness of native species reach 50% of cover and species richness at reference sites; and (2) the replacement vegetation has persisted at least one summer without irrigation.</p> <p>Annual monitoring reports will be prepared and submitted to CDFG and will be made available to the public to guide future mitigation planning. Monitoring reports will describe all restoration/enhancement measures taken in the preceding year; describe success and completion of those efforts and other pertinent site conditions (erosion, trespass, animal damage) in qualitative terms; and describe vegetation survival or establishment in quantitative terms.</p>			
			2. CDFG
			Annually until mitigation has been achieved
<p><u>LV 4.4 60 Bridges over the Santa Clara River shall be designed to minimize impacts to natural areas and riparian resources from associated lighting and stormwater runoff. All lighting will be designed to be directed away from natural areas (pursuant to SP-4.6-56) using shielded lights, low sodium-vapor lights, bollard lights, or other available light and glare minimization methods. Bridges will be designed to minimize normal vehicular lighting from trespassing into natural areas using side walls a minimum of 24 inches high. All stormwater from the bridges will be directed to water treatment facilities for water quality treatment.</u></p>	Project Applicant	Review of Project Design	1. LACDRP
			2. LACDRP
			3. Field Verification

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<p><u>LV 4.4-61 a. As a supplement to LV 4.4-1, LV 4.4-15, and LV 4.4-29 through LV 4.4-41, additional habitat mitigation through replacement or enhancement of nesting/foraging habitat for least Bell's vireo will be provided for certain key habitat zones at higher ratios (identified as "key population areas" in Figure 4.5-86, Alternative 2 Impacts to Least Bell's Vireo Habitat). Southern willow scrub, southern cottonwood-willow riparian, arrow weed scrub, mulefat scrub, and Mexican elderberry scrub and woodland that provide nesting/foraging habitat for least Bell's vireo in "key population areas" shall be replaced or enhanced. All permanent loss to nesting/foraging habitat in key population areas shall be mitigated at a 5:1 ratio unless otherwise authorized by CDFG or USFWS. Temporary habitat loss of foraging/nesting habitat in key population areas shall be mitigated at a 2:1 ratio. The requirements for replacing habitat by either creating new habitat or removing exotic species from existing habitat shall follow the procedures outlined in LV 4.4-1, LV 4.4-15, and LV 4.4-29 through LV 4.4-41. To replace the lost functions of habitat located adjacent to the Santa Clara River due to noise impacts, all nesting/foraging habitat within the 60 dBA sound contour (associated with development site roadway improvements) shall be considered degraded. Nesting/foraging habitat within this area shall be mitigated at a ratio of 2:1.</u></p>	<p>Applicant (Project Biologist)</p>	<p>Field Verification</p>	<p>1. CDFG/USFWS</p>
<p>b. The loss of documented occupied nesting habitat for coastal California gnatcatcher shall be mitigated. If the coastal California gnatcatcher is identified nesting on site, the applicant will acquire or preserve nesting coastal California gnatcatcher habitat at a 3:1 ratio for impacts to documented occupied habitat, or by the ratio specified in LV 4.4-29, whichever is greater. Mitigation acquisition shall occur at an agreed-upon location as approved by the USFWS upon consultation. The applicant shall enter into a binding legal agreement regarding the preservation of occupied habitat describing the terms of the acquisition, enhancement, and management of those lands.</p>			
			<p>2. CDFG/USFWS</p>
			<p>3. During Construction Activity</p>
<p><u>LV 4.4-62 At least 1,900 acres of Open Area within the Specific Plan area shall be offered for dedication to an NLMO in fee and/or by conservation easement. These 1,900 acres of the Open Area will be left as natural vegetation. Dedication of open areas lands shall be reported annually to CDFG.</u></p>	<p>Project Applicant</p>	<p>Annual Report</p>	<p>1. CDFG</p>
			<p>2. CDFG</p>
			<p>3. Annually</p>

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<p><u>LV 4.4-63 The mitigation program shall incorporate applicable principles in the interagency Federal Guidance for the Establishment, Use, and Operation of Mitigation Banks (60 FR 58605-58614) to the extent feasible and appropriate, particularly the guidance on administration and accounting. Nothing in the section 404 or section 2081 Permit or section 1605 agreement shall preclude the applicant from selling mitigation credits to other parties wishing to use those permits or that agreement for a project and/or maintenance activity included in the permits/agreement.</u></p>	<p>Applicant/Project Biologist</p>	<p>Review of Mitigation Programs</p>	<p>1. CDFG</p>
			<p>2. CDFG</p>
<p><u>LV 4.4-64 Construction plans shall include necessary design features and construction notes to ensure protection of vegetation communities and special status plant and aquatic wildlife species adjacent to construction. In addition to applicable erosion control plans and performance under SCAQMD Rule 403d dust control (SCAQMD 2005), the Project stormwater pollution prevention plan (SWPPP) shall include the following minimum BMPs. Together, the implementation of these requirements shall ensure protection of adjacent habitats and wildlife species during construction. At a minimum, the following measures/restrictions shall be incorporated into the SWPPP, and noted on construction plans where appropriate, to avoid impacting special status species during construction:</u></p> <ul style="list-style-type: none"> • <u>Avoid planting or seeding invasive species in development areas within 200 feet of native vegetation communities.</u> • <u>Provide location and details for any dust control fencing along Project boundaries (LV 4.4-43).</u> 	<p>Project Applicant</p>	<p>Review of Construction Plans</p>	<p>1. LACDRP</p>

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<ul style="list-style-type: none"> • <u>Vehicles shall not be driven or equipment operated in areas of ponded or flowing water, or where wetland vegetation, riparian vegetation, or aquatic organisms may be destroyed, except as otherwise provided for in the 404 Permit or 1603 Agreement.</u> • <u>Silt settling basins installed during the construction process shall be located away from areas of ponded or flowing water to prevent discolored, silt bearing water from reaching areas of ponded or flowing water during normal flow regimes.</u> • <u>If a stream channel has been altered during the construction and/or maintenance operations, its low flow channel shall be returned as nearly as practical to pre Project topographic conditions without creating a possible future bank erosion problem or a flat, wide channel or sluice like area. The gradient of the streambed shall be returned to pre Project grade, to the extent practical, unless it represents a wetland restoration area.</u> • <u>Temporary structures and associated materials not designed to withstand high seasonal flows shall be removed to areas above the high water mark before such flows occur.</u> • <u>Staging/storage areas for construction equipment and materials shall be located outside of the ordinary high water mark.</u> • <u>Any equipment or vehicles driven and/or operated within or adjacent to the stream shall be checked and maintained daily, to prevent leaks of materials that could be deleterious to aquatic life if introduced to water.</u> • <u>Stationary equipment such as motors, pumps, generators, and welders which may be located within the riverbed construction zone shall be positioned over drip pans. No fuel storage tanks shall be allowed in the riverbed.</u> 			
<ul style="list-style-type: none"> • <u>No debris, bark, slash sawdust, rubbish, cement or concrete or washing thereof, oil, petroleum products, or other organic material from any construction, or associated activity of whatever nature, shall be allowed to enter into, or be placed where it may be washed by rainfall or runoff into, watercourses included in the permit. When construction operations are completed, any excess materials or debris shall be removed from the work area.</u> • <u>No equipment maintenance shall be done within or near any stream where petroleum products or other pollutants from the equipment may enter these areas with stream flow.</u> • <u>The operator shall install and use fully covered trash receptacles to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash.</u> • <u>The operator shall not permit pets on or adjacent to the construction site.</u> <p><u>No guns or other weapons are allowed on the construction site during construction, with the exception of the security personnel and only for security functions. No hunting shall be authorized/permitted during construction.</u></p>			
			2. LACDRP
			3. Field Verification

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<p><u>LV 4.4-65 The installation of new, or relocation of existing, utility poles and phone and cell towers shall be coordinated with CDFG where located in the High Country SMA and Salt Creek area. The applicant or SCE shall install utility poles, phone, and cell towers in conformance with APLIC standards for collision-reducing techniques as outlined in Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006 (APLIC 2006).</u></p>	<p>Applicant/SCE</p>	<p>Review of Plans</p>	<p>1. CDFG</p>
			<p>2. CDFG</p>
			<p>3. As needed</p>
<p><u>LV 4.4-66 a. All surfaces on new antennae and phone/utility towers shall be designed and operated with anti perching devices in conformance with APLIC standards to deter California condors and other raptors from perching. During construction the area shall be kept clean of debris, such as cable, trash, and construction materials. The applicant shall collect all microtrash and litter (anything shiny, such as broken glass), vehicle fluids, and food waste from the Project area on a daily basis. Workers will be trained on the issue of microtrash: what constitutes microtrash, its potential effects on California condors, and how to avoid the deposition of microtrash.</u></p> <p><u>b. The applicant shall retain a qualified biologist with knowledge of California condors to monitor construction activities within the Project area. The resumes of the proposed biologist(s) will be provided to CDFG for concurrence. This biologist(s) will be referred to as the authorized biologist hereafter. During clearing and grubbing of construction areas, the qualified biologist shall be present at all times. During mass grading, construction sites shall be monitored on a daily basis. The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed. If condors are observed landing in the Project area, the applicant shall avoid further construction within 500 feet of the sighting until the animals have left the area, or as otherwise authorized by CDFG and USFWS. All condor sightings in the Project area will be reported to CDFG and USFWS within 24 hours of the sighting. Should condors be found roosting within 0.5 mile of the construction area, no construction activity shall occur between one hour before sunset to one hour after sunrise, or until the condors leave the area, or as otherwise directed by USFWS.</u></p>	<p>Applicant (Project Biologist)</p>	<p>Field Verification</p>	<p>1. CDFG/USFWS</p>

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<p>Should condors be found nesting within 1.5 miles of the construction area, no construction activity will occur until further authorization occurs from CDFG and USFWS.</p> <p>c. To further protect California condor potentially foraging in the Project area over the long term from negative interactions with humans and/or artificial structures, the applicant or the JPA or the NLMO shall remove dead cattle that are found or reported within 1,000 feet of a residential or commercial development boundary. Dead cattle shall be relocated to a predetermined location within the High Country SMA or Salt Creek area. The locations where carcasses shall be placed shall be a minimum of 1,000 feet from a development area boundary. Appropriate locations for transfer of carcasses include open grasslands and oak/grassland areas where condors can readily detect carcasses and easily land and take off without encountering physical obstacles such as powerlines and other utility structures. The proposed locations would be selected and approved by the CDFG and USFWS. Pursuant to this measure, a telephone number for reporting dead cattle shall be provided and actively maintained. Any cattle carcasses transferred to the relocation areas shall be reported to the USFWS Condor group.</p>			
			2. CDFG/USFWS
			3. During Grading and Construction Activities
4.5 FLOODPLAIN MODIFICATIONS			
<p>Please refer to Section 4.2, Hydrology and Section 4.4, Biota, of this MMP for a listing of Program EIR mitigation measures pertaining to flood control. No additional mitigation beyond that contained in Section 4.2, Hydrology and Section 4.4, Biota is required because no significant impacts to biological resources are anticipated due to the bank stabilization, bridge, or changes in the floodplain due to project modifications.</p>	<p>Please Refer to 4.2, Hydrology, and 4.4, Biota, of this MMP</p>	<p>Please Refer to 4.2, Hydrology, and 4.4, Biota, of this MMP</p>	<p>Please Refer to 4.2, Hydrology, and 4.4, Biota, of this MMP</p>
4.6 VISUAL QUALITIES			
<p>SP 4.7-1. In conjunction with the development review process set forth in Chapter 5 of the Specific Plan, all future subdivision maps and other discretionary permits which allow construction shall incorporate the Development Guidelines (Specific Plan Chapter 3) and Design Guidelines (Specific Plan Chapter 4), and the design themes and view considerations listed in the Specific Plan.</p>	<p>Applicant</p>	<p>Plan Check</p>	<p>1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Approval of Final Maps</p>

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<p>SP 4.7-2. In design of residential tentative tract maps and site planning of multifamily areas and Commercial and Mixed-Use land use designations along State Route 126 (SR-126), the following Design Guidelines shall be utilized:</p>	Applicant	Plan Check	1. LA County Department of Regional Planning		
<ul style="list-style-type: none"> · Where the elevations of buildings will obstruct the views from SR-126 to the south, the location and configuration of individual buildings, driveways, parking, streets, signs and pathways shall be designed to provide view corridors of the river, bluffs, and the ridge lines south of the river. Those view corridors may be perpendicular to SR-126 or oblique to it in order to provide for views of passengers within moving vehicles on SR-126; • The Community Park between SR-126 and the Santa Clara River shall be designed to promote views from SR-126 of the river, bluffs and ridge lines to the south of the river; • Residential Site Planning Guidelines set forth in Section 4.3.1 and Residential and Architectural Guidelines set forth in Section 4.4.1 Residential shall be employed to ensure that the views from SR-126 are aesthetically pleasing and that views of the river, bluffs and ridge lines south of the river are preserved to the extent practicable; 			2. LA County Department of Regional Planning		
<ul style="list-style-type: none"> • Mixed-Use and the Commercial Site Planning Guidelines set forth in Section 4.3.2 and Architectural Guidelines set forth Section 4.4.2 shall be incorporated to the extent practicable in the design of the Riverwood Village Mixed-Use and Commercial land use designations to ensure that the views from SR-126 are aesthetically pleasing and to preserve views of the river, bluffs and ridge lines south of the river; and • Landscape improvements along SR-126 shall incorporate the Landscape Design Guidelines, set forth in Section 4.6 in order to ensure that the views from SR-126 are aesthetically pleasing and to preserve views of the river, bluffs and ridge lines south of the river. 			3. Prior to Approval of Final Subdivision Maps or Site Plans as applicable		
4.7 TRAFFIC/ACCESS					
<p>SP 4.8-1. The applicants for future subdivision maps which permit construction shall be responsible for funding and constructing all on-site traffic improvements except as otherwise provided below. The obligation to construct improvements shall not preclude the applicants' ability to seek local, state, or federal funding for these facilities. <i>(All on-site traffic improvements included as part of the Landmark Village project will be funded and/or constructed by the project applicant.)</i></p>	Applicant(s)	Bonding of and/or Receipt of Funding and/or Field	1. LACDPW		
			2. LACDPW		
			3. Prior to Issuance of Building Permit		

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<p>SP 4.8-2. Prior to the approval of each subdivision map which permits construction, the applicant for that map shall prepare a transportation performance evaluation which shall indicate the specific improvements for all on-site roadways which are necessary to provide adequate roadway and intersection capacity as well as adequate right-of-way for the subdivision and other expected traffic. Transportation performance evaluations shall be approved by Los Angeles County Department of Public Works according to standards and policies in effect at that time. The transportation performance evaluation shall form the basis for specific conditions of approval for the subdivision. <i>(This EIR, Section 4.7, provides the required transportation performance evaluation and, in combination with Section 1.0, Project Description, indicates the on-site roadway improvements necessary to provide adequate capacity.)</i></p>	<p>Applicant (Traffic Engineer)</p>	<p>Receipt and Review of Transportation Performance Evaluation</p>	<p>1. LACDPW 2. LACDPW 3. Prior to Approval of Subdivision Maps</p>
<p>SP 4.8-3. The applicants for future subdivisions shall provide the traffic signals at the 15 locations labeled B through P in Figure 4.8-17, as well as any additional signals warranted by future subdivision design. Signal warrants shall be prepared as part of the transportation performance evaluations noted in Mitigation Measure 4.8-2. <i>(Two of the intersections within the Landmark Village site will be signalized intersections, including the one intersection depicted as signalized by Specific Plan Figure 4.8-17, Long Canyon Road/A Street. This EIR, Section 4.7, in combination with the traffic report presented in Recirculated EIR Appendix 4.7, provides the required signal warrants.)</i></p>	<p>Applicant (Traffic Engineer)</p>	<p>Installation of Traffic Signals or funding of or bonding of project's share</p>	<p>1. LACDPW 2. LACDPW 3. Prior to Issuance of Occupancy Permits</p>
<p>SP 4.8-4. All development within the Specific Plan shall conform to the requirements of the Los Angeles County Transportation Demand Management (TDM) Ordinance. <i>(The Landmark Village project would conform to the County's TDM Ordinance.)</i></p>	<p>Applicant (Traffic Engineer)</p>	<p>Subdivision Review</p>	<p>1. LACDPW 2. LACDPW 3. Prior to Final Map Approval and/or approval of improvement plans</p>
<p>SP 4.8-5. The applicants for all future subdivision maps which permit construction shall consult with the local transit provider regarding the need for, and locations of, bus pull-ins on highways within the Specific Plan area. All bus pull-in locations shall be approved by the Department of Public Works, and approved bus pull-ins shall be constructed by the applicant. <i>(Final locations of bus pull-ins will be coordinated with the local transit provider and the Department of Public Works and constructed in conjunction with the project.)</i></p>	<p>Applicant (Traffic Engineer)</p>	<p>Verification of Consultation with Transit Providers Review of bus</p>	<p>1. LACDPW 2. LACDPW 3. Prior to Final Map Approval and/or approval of improvement plans</p>

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<p>SP 4.8-6. Prior to the recordation of the first subdivision map which permits construction, the applicant for that map shall prepare a transportation performance evaluation which shall determine the specific improvements needed to each off-site arterial and related costs in order to provide adequate roadway and intersection capacity for the expected Specific Plan and General Plan buildout traffic trips. The transportation performance evaluation shall be based on the Master Plan of Highways in effect at that time and shall be approved by the Los Angeles County Department of Public Works. The applicant shall be required to fund its fair share of improvements to these arterials, as stated on Table 4.8-18.</p>	<p>Applicant(s)</p>	<p>Payment of Fee Determination of fair share funding obligation and fee structure for off-site improvements</p>	<p>1. LACDPW</p>
<p>The applicants total funding obligation shall be equitably distributed over the housing units and non-residential building square footage (i.e., Business Park, Visitor-Serving, Mixed-Use, and Commercial) in the Specific Plan, and shall be a fee to be paid to the County and/or the City at each building permit. For off-site areas within the County unincorporated area, the applicant may construct improvements for credit against or in lieu of paying the fee. (This EIR, Section 4.7, provides the referenced transportation performance evaluation, including a determination of the improvements necessary to each off-site arterial, as well as appropriate fair-share funding requirements.)</p>			<p>2. LACDPW 3. Prior to Recordation of the First Subdivision Map</p>
<p>SP 4.8-7. Each future performance evaluation which shows that a future subdivision map will create significant impacts on SR-126 shall analyze the need for additional travel lanes on SR-126. If adequate lane capacity is not available at the time of subdivision, the applicant of the subdivision shall fund or construct the improvements necessary to serve the proposed increment of development. Construction or funding of any required facilities shall not preclude the applicant's ability to seek state, federal, or local funding for these facilities. <i>(The future performance evaluation presented in this EIR, Section 4.7, determined that the Landmark Village project would cause a significant impact at the SR-126/I-5 interchange at buildout and would be responsible for its fair share of the improvements to this interchange.) (This improvement has since been completed.)</i></p>	<p>Applicant(s)</p>	<p>Receipt and Review of Transportation Performance Evaluation Applicant Funding of or bonding of Fair Share of</p>	<p>1. LACDPW</p>
<p>SP 4.8-8. Project-specific environmental analysis for future subdivision maps which allow construction shall comply with the requirements of the Congestion Management Program in effect at the time that subdivision map is filed. <i>(The future performance evaluation presented in this EIR, Section 4.7, complies with the requirements of the Congestion Management Program presently in effect.)</i></p>			<p>2. LACDPW 3. Prior to Recordation of Final Tract Map</p>
<p>SP 4.8-8. Project-specific environmental analysis for future subdivision maps which allow construction shall comply with the requirements of the Congestion Management Program in effect at the time that subdivision map is filed. <i>(The future performance evaluation presented in this EIR, Section 4.7, complies with the requirements of the Congestion Management Program presently in effect.)</i></p>	<p>Applicant</p>	<p>Review of future environmental analysis</p>	<p>1. LACDPW</p>
			<p>2. LACDPW 3. Prior to certification of future environmental documents</p>

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<p>SP 4.8-9. Prior to the recordation of the first subdivision map which permits construction, the applicant for that map shall prepare a transportation evaluation including all of the Specific Plan land uses which shall determine the specific improvements needed to the following intersections with SR-126 in the City of Fillmore and community of Piru in Ventura County: A, B, C, D, and E Streets, Old Telegraph, Olive, Central, Santa Clara, Mountain View, El Dorado Road, and Pole Creek (Fillmore), and Main/Torrey and Center (Piru). The related costs of those intersection improvements and the project's fair share shall be estimated based upon the expected Specific Plan traffic volumes. The transportation performance evaluation shall be based on the Los Angeles County Master Plan of Highways in effect at that time and shall be approved by the Los Angeles County Department of Public Works.</p>	<p>Applicant (Traffic Engineer)</p>	<p>Receipt and Review of Transportation Performance Evaluation Payment of Fee to City of Fillmore or County of Ventura</p>	<p>1. LACDPW</p>
<p>The applicant's total funding obligation shall be equitably distributed over the housing units and non-residential building square footage (i.e., Business Park, Visitor Center, Mixed Use, and Commercial) in the Specific Plan, and shall be a fee to be paid to the City of Fillmore and the County of Ventura at each building permit. (This EIR, Section 4.7, in combination with the traffic reports presented in Recirculated EIR Appendix 4.7, provides the required transportation evaluation of SR-126 intersections in Ventura County. As discussed in the EIR, Subsection 9.b.(3), buildout of the Newhall Ranch Specific Plan would contribute to potentially significant cumulative impacts at the intersection of Center Street and Telegraph Road (SR-126) in the Ventura County community of Piru. Pursuant to mitigation measure LV-4.7-21, below, the applicant will pay to Ventura County its fair-share of the costs to implement recommended roadway improvements at the Center Street/Telegraph Road intersection.</p>			<p>2. LACDPW</p>
<p>Additionally, as discussed in the EIR, Subsection 9.b.(4), buildout of the Newhall Ranch Specific Plan would contribute to potentially significant cumulative impacts at two intersections in the Ventura County City of Fillmore. Pursuant to Mitigation Measure LV-4.7-20, the applicant will pay \$300,000 to the City of Fillmore as its agreed-upon fair-share of the costs to construct transportation-related improvements deemed necessary by the City of Fillmore.)</p>			<p>3. Prior to Recordation of the First Subdivision Map; Payment of Fee Prior to Issuance of Building Permits</p>
<p>SP 4.8-10. The Specific Plan is responsible to construct or fund its fair-share of the intersections and interchange improvements indicated on Table 4.8-18. Each future transportation performance evaluation required by Mitigation Measure 4.8-2 which identifies a significant impact at these locations due to subdivision map-generated traffic shall address the need for additional capacity at each of these locations. If adequate capacity is not available at the time of subdivision map recordation, the performance evaluation shall determine the improvements necessary to carry Specific Plan generated traffic, as well as the fair share cost to construct such improvements. If the future subdivision is conditioned to construct a phase of improvements which results in an overpayment of the fair-share cost of the improvement, then an appropriate adjustment (offset) to the fees paid to Los Angeles County and/or City of Santa Clarita pursuant to Mitigation Measure</p>	<p>Applicant</p>	<p>Field Verification of Construction or Receipt of Fair Share Funding or Bonding</p>	<p>1. LACDPW</p>
<p>4.8-6 above shall be made. (The transportation performance evaluation presented in this EIR, Section 4.7, fulfills</p>			<p>2. LACDPW</p>

		8.0 Mitigation	Monitoring Plan
<p>the requirements of this Specific Plan mitigation measure relative to Landmark Village.)</p>			<p>3. Prior to Issuance of Occupancy Permits</p>
<p>SP 4.8-11. The applicant of the Newhall Ranch Specific Plan shall participate in an I-5 developer fee program, if adopted by the Board of Supervisors for the Santa Clarita Valley. <i>(The Board of Supervisors has not adopted a developer fee program for the Santa Clarita Valley. However, the applicant will participate in funding its fair share of mainline improvements in accordance with Mitigation Measures LV-4.7-17 through LV-4.7-20 .)</i></p>	Applicant	Field Verification of Construction or Receipt of Fair Share Funding or Bonding	<p>1. LACDPW</p> <p>2. LACDPW</p> <p>3. Prior to Issuance of Occupancy Permits</p>
<p>SP 4.8-12. The applicant of the Newhall Ranch Specific Plan shall participate in a transit fee program, if adopted for the entire Santa Clarita Valley by Los Angeles County and City of Santa Clarita. <i>(The applicant will be required to pay the applicable transit fees in place at the time of building permit issuance.)</i></p>	Applicant	Field Verification of Construction or Receipt of Fair	<p>1. LACDPW</p> <p>2. LACDPW</p> <p>3. Prior to Issuance of Occupancy Permits</p>
<p>SP 4.8-13. Prior to the approval of each subdivision map which permits construction, the applicant for that map shall prepare a traffic analysis approved by the Los Angeles County Department of Public Works. The analysis will assess project and cumulative development (including an existing plus cumulative development scenario under the County's Traffic Impact Analysis Report Guidelines (TIA) and its Development Monitoring System (DMS)). In response to the traffic analysis, the applicant may construct off-site traffic improvements for credit against, or in lieu of paying, the mitigation fees described in Mitigation Measure 4.8-6, above. If future subdivision maps are developed in phases, a traffic study for each phase of the subdivision map may be submitted to determine the improvements needed to be constructed with that phase of development. <i>(The traffic analysis presented in this EIR, Section 4.7, fulfills the requirements of this Specific Plan mitigation measure.)</i></p>	Applicant(s) (Project Traffic Engineer)	Receipt and Review of TIA and DMS Traffic Analysis Applicant Funding of or bonding of Fair Share of Improvements	<p>1. LACDPW</p> <p>2. LACDPW</p> <p>3. Prior to Recordation of the Final Tract Map</p>
<p>LV-4.7-1. The project applicant shall construct all on-site local roadways and intersections to County of Los Angeles codes and regulations, unless provided otherwise on the Vesting Tentative Tract Map when approved..</p>	Applicant (Traffic Engineer)	Field Verification of Construction	<p>1. LACDPW</p> <p>2. LACDPW</p> <p>3. Prior to Recordation of the Final Tract Map</p>
<p>LV 4.7-2. The main access for Landmark Village will be provided from SR-126 via the existing intersections of Wolcott Way and Chiquito Canyon Road. Future phases of the NRSP will provide access to and from south via Long Canyon Road. Unless an updated long range study is prepared which demonstrates that the intersections will adequately handle the area buildout traffic as at grade intersections, adequate road right of way shall be reserved for future grade separated interchanges at these two locations, as approved in the NRSP.</p>	Applicant (Traffic Engineer)	Field Verification of Construction	<p>1. LACDPW</p> <p>2. LACDPW</p> <p>3. Prior to recordation of the Final Tract Map</p>

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<p>LV 4.7-3. 80. Wolcott/SR-126 – Prior to occupancy of the first dwelling unit, the project applicant shall: (i) re-stripe the southbound shared left-turn/through lane to an exclusive through lane (resulting in 1 southbound left-turn lane, 1 southbound through lane, and 1 southbound right turn lane); (ii) add a northbound left turn lane and 2 northbound right turn lanes (resulting in 1 northbound left turn lane, 1 northbound through lane and 2 northbound right turn lanes); (iii) add an eastbound right turn lane (resulting in 1 eastbound left turn lane, 2 eastbound through lanes, and 1 eastbound right turn lane); and (iv) add a second westbound left turn lane (resulting in 2 westbound left turn lanes, 2 westbound through lanes, and 1 westbound right turn lane).</p>	<p>Applicant (Traffic Engineer)</p>	<p>Field Verification of Construction</p>	<p>1. LACDPW</p>
<p>Said improvements are to be completed at their ultimate design locations and operational to the satisfaction of the County of Los Angeles Department of Public Works (Department of Public Works) concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. Signals shall be modified to the satisfaction of the Department of Public Works.</p>			<p>2. LACDPW</p>
			<p>3. Concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed</p>
<p>LV 4.7-4. The Landmark Village traffic study is based on the Santa Clarita Valley Consolidated Traffic Model and assumes the following roadway improvements will be in place with Phase I of the project. In accordance with the County of Los Angeles Department of Public Works Traffic Impact Analysis Report Guidelines (TIARG), the following improvements shall be made a condition of approval for the project to be completed at their ultimate design locations and operational to the satisfaction of the Department of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed:</p>	<p>Applicant (Traffic Engineer)</p>	<p>Field Verification of Construction</p>	<p>1. LACDPW</p>
<p>· Reconstruct the Golden State (I-5) Freeway/SR-126 Freeway interchange by adding access to eastbound SR-126 from southbound I-5, access to southbound I-5 from westbound SR-126, direct access to northbound I-5 from westbound SR-126, and widening bridge to accommodate 8 lanes. <i>[This measure has been completed.]</i></p>			<p>2. LACDPW</p>
<p>· Construct Newhall Ranch Road segment between Vanderbilt Way and Copper Hill Drive/Rye Canyon Road. <i>[This measure has been completed.]</i></p>			<p>3. Concurrent with Phase I and concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed</p>

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<p>LV 4.7-5. 110. Chiquito Canyon/Long Canyon/SR-126 – Prior to occupancy of the 501st dwelling unit or a comparable amount of dwelling units plus commercial square feet (to be determined based on a conversion factor of 2.5 dwelling units per thousand square feet), the project applicant shall add: (i) a northbound left turn lane and a northbound right turn lane (resulting in 1 northbound left turn lane, 1 northbound through lane, and 1 northbound right turn lane); (ii) a southbound left turn lane (resulting in 1 southbound left turn lane and 1 shared southbound through lane/southbound right turn lane); and (iii) a westbound left turn lane (resulting in 1 westbound left turn lane, 2 westbound through lanes, and 1 westbound right turn lane). Said improvements are to be completed and operational to the satisfaction of the Department of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.</p>	<p>Applicant (Traffic Engineer)</p>	<p>Field Verification of Construction</p>	<p>1. LACDPW 2. LACDPW 3. Prior to occupancy of the 501st dwelling unit or a comparable amount of dwelling units plus commercial square feet and concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed</p>
<p>LV 4.7-6. I-5 Southbound Ramps/SR-126 – Prior to exceeding occupancy of 1,444 dwelling units and 100,000 commercial square feet (or fewer dwelling units and a greater amount of commercial square feet, to be calculated based on a conversion factor of 2.5 dwelling units per thousand square feet of commercial space), the project applicant shall add a third westbound through lane (resulting in 3 westbound through lanes and a free flow westbound right turn lane) to be completed at its ultimate design location and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. Signals shall be modified to the satisfaction of the Department of Public Works. [This measure has been completed.]</p>	<p>Applicant (Traffic Engineer)</p>	<p>Field Verification of Construction</p>	<p>1. LACDPW 2. LACDPW 3. Prior to exceeding occupancy of 1,444 dwelling units and 100,000 commercial square feet and concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed</p>

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<p>LV 4.7-7. 80. Wolcott/SR-126 – Prior to exceeding occupancy of 1,444 dwelling units and 100,000 commercial square feet (or fewer dwelling units and a greater amount of commercial square feet, to be calculated based on a conversion factor of 2.5 dwelling units per thousand square feet of commercial space), the project applicant shall add: (i) a second southbound left turn lane (resulting in 2 southbound left turn lanes, 1 southbound through lane, and 1 southbound right turn lane); (ii) a second eastbound left turn lane and a third eastbound through lane (resulting in 2 eastbound left turn lanes, 3 eastbound through lanes, and 1 eastbound right turn lane); and (iii) a third westbound through lane (resulting in 2 westbound left turn lanes, 3 westbound through lanes, and 1 westbound right turn lane). Said improvements are to be completed at their ultimate design locations and operational to the satisfaction of the Department of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.</p>	<p>Applicant (Traffic Engineer)</p>	<p>Field Verification of Construction</p>	<p>1. LACDPW</p>
<p>Signals shall be modified to the satisfaction of the Department of Public Works. (While the Project Applicant is required by this measure to construct each of the designated improvements, the Landmark Village project's fair-share responsibility for the improvements identified in this mitigation measure is 62.1 percent [Phase 1, 12.2 percent; Phase 2, 19.3 percent; and, Project Buildout, 30.6 percent], with the exception of the third eastbound through lane required as part of improvement (ii); the project's fair-share for that improvement is 100%. This fair-share information is provided to facilitate any future action by the Project applicant to seek participatory funding from other development unrelated to the Landmark Village project.)</p>			<p>2. LACDPW 3. Prior to exceeding occupancy of 1,444 dwelling units and 100,000 commercial square feet and concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed</p>
<p>LV-4.7-8. 110. Chiquito Canyon/Long Canyon Road/SR-126 – Prior to exceeding occupancy of 1,444 dwelling units and 100,000 commercial square feet (or fewer dwelling units and a greater amount of commercial square feet, to be calculated based on a conversion factor of 2.5 dwelling units per thousand square feet of commercial space), the project applicant shall add: (i) a second northbound through lane, and a second northbound right turn lane (resulting in 1 northbound left turn lane, 2 northbound through lanes, and 2 northbound right turn lanes); (ii) convert the southbound shared through lane/right-turn lane to a southbound through lane and add a southbound right turn lane (resulting in 1 southbound left turn lane, 1 southbound through lane, and 1 southbound right turn lane); (iii) add an eastbound right turn lane (resulting in 1 eastbound left turn lane, 2 eastbound through lanes, and 1 eastbound right turn lane); and (iv) add a second westbound left turn lane (resulting in 2 westbound left turn lanes, 2 westbound through lanes, and 1 westbound right turn lane).</p>	<p>Applicant (Traffic Engineer)</p>	<p>Field Verification of Construction</p>	<p>1. LACDPW</p>

		8.0 Mitigation Monitoring Plan	
Signals shall be modified to the satisfaction of the Department of Public Works. Alternatively, the project applicant shall construct a grade separated crossing to the satisfaction of the County of Los Angeles Department of Public Works. Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.			2. LACDPW 3. Prior to exceeding occupancy of 1,444 dwelling units and 100,000 commercial square feet and concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed
LV 4.7-9. 7. I-5 SB Ramps/SR-126 – The project applicant shall fund its fair share of the cost to add: (i) a fourth southbound lane (resulting in 2 southbound left-turn lanes, 1 shared southbound left turn lane/southbound right turn lane, and 1 dedicated southbound right turn lane); (ii) a third and fourth eastbound through lane (resulting 4 four eastbound through lanes and 1 free flow eastbound right turn lane); and (iii) a fourth westbound through lane (resulting in 4 westbound through lanes and 1 free flow westbound right turn lane). Signals shall be modified to the satisfaction of the Department of Public Works. (Project share = 38.3 percent. The project may elect to pay by phase as each phase gets recorded: Phase I= 8.3 percent, Phase II= 8.1 percent and Phase III= 21.9 percent). Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.	Applicant	Receipt of Fair Share Funding or Bonding	1. LACDPW
[This measure, with the exception of striping a fourth westbound through lane and striping a shared southbound left-turn/right-turn lane, has been completed.]			2. LACDPW 3. Concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed
LV 4.7-10. 8. I-5 NB Ramps/SR-126 –The project applicant shall fund its fair share of the cost to: (i) add a third northbound left turn lane (resulting in 3 northbound left turn lanes and 1 northbound right turn lane);	Applicant	Receipt of Fair Share Funding	1. LACDPW 2. LACDPW

<p>(ii) add a third and fourth eastbound through lane (resulting in 4 eastbound through lanes and 1 free flow eastbound right turn lane); and (iii) add a third westbound through lane (for 3 westbound through lanes and 1 free flow westbound right turn lane). Signals shall be modified to the satisfaction of the Department of Public Works. (Project Share = 20.8 percent. The project may elect to pay by phase as each phase gets recorded: Phase I= 4.7 percent, Phase II= 4.0 percent and Phase III= 12.1 percent). Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. <i>[This measure has been completed.]</i></p>		<p>8.0 Mitigation or Bonding</p>	<p>Monitoring Plan 3. Concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed</p>
<p>LV 4.7-11. 81, 82, 83, and 94. Commerce Center/SR-126 – The project applicant shall fund its fair share of the cost to construct a Grade Separated Interchange. (Project Share = 33.8 percent. The project may elect to pay by phase as each phase gets recorded: Phase I= 6.6 percent, Phase II= 9.1 percent and Phase III= 18.1 percent).</p>	<p>Applicant</p>	<p>Receipt of Fair Share Funding or Bonding</p>	<p>1. LACDPW 2. LACDPW 3. Concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed</p>
<p>LV 4.7-12. 110. Chiquito Canyon/Long Canyon Road/SR-126 – The project applicant shall fund its fair share of the cost to add: (i) a second northbound left turn lane (resulting in 2 northbound left turn lanes, 2 northbound through lanes and 2 northbound right turn lanes); (ii) a second southbound left turn lane, and second and third southbound through lanes (resulting in 2 southbound left turn lanes, 3 southbound through lanes and 1 southbound right turn lane); (iii) a second eastbound left turn lane and a third eastbound through lane (resulting in 2 eastbound left turn lanes, 3 eastbound through lanes, and 1 eastbound right turn lane); and (iv) a third westbound through lane (resulting in 2 westbound left turn lanes, 3 westbound through lanes, and 1 westbound right turn lane) Alternatively, the project applicant shall construct a grade separated crossing to the satisfaction of the County of Los Angeles Department of Public Works (Project Share = 62 percent).</p>	<p>Applicant</p>	<p>Receipt of Fair Share Funding or Bonding</p>	<p>1. LACDPW 2. LACDPW 3. Concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed</p>
<p>The project applicant may elect to pay its fair-share by phase as each phase is recorded: Phase I= 3 percent, Phase II= 16 percent and Phase III= 43 percent). Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.</p>			<p>2. LACDPW 3. Concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed</p>
<p>LV 4.7-13. Applicable transit mitigation fees shall be paid at the time of building permit issuance, unless modified by an approved transit mitigation agreement.</p>	<p>Applicant</p>	<p>Payment of Transit Mitigation Fees</p>	<p>1. LACDPW 2. LACDPW 3. Concurrent with Building Permit Issuance</p>
<p>LV 4.7-14. Prior to the commencement of project construction, traffic management controls in accordance with the California Department of Transportation</p>	<p>Applicant (Traffic Engineer)</p>	<p>Field Verification of</p>	<p>1. LACDPW 2. LACDPW</p>

<p>(Caltrans) traffic manual. These traffic management controls shall include measures determined on the basis of site-specific conditions including, as appropriate, the use of construction signs (e.g., "Construction Ahead") and delineators, and private driveway and cross-street closures.</p>		<p>8.0 Mitigation/Installation</p>	<p>Monitoring Plan 3. Concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed</p>
<p>LV 4.7-15. Traffic signals shall be designed and installed or designed and funded, as specified below, at each of the intersections listed below. The design and the construction of the traffic signals shall be the sole responsibility of the project. The signals shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed, and prior to the development milestones described below:</p>	<p>Applicant (Traffic Engineer)</p>	<p>Design and Installation of traffic signals</p>	<p>1. LACDPW</p>
<p>Phase I: Wolcott Way at Henry Mayo Drive (SR-126) (signal modification), prior to the first lift of paving on Wolcott Way or SR-126, whichever comes first; Phase II: Chiquito Canyon Road and Long Canyon Road (Future) at Henry Mayo Drive (SR-126) (design and install), prior to the first lift of paving on Chiquito or SR-126, whichever comes first; Phase II: School West Driveway at "A" Street (TT 53108) (design and install), prior to rough grade certification for the school lot (Lot 309); Additionally, final school/park site plans and detailed street signing and striping plans for along the school/park frontages, as well as the signal plan for the traffic signal, should be prepared and submitted to Public Works' Traffic and Lighting Division for review and approval;</p>			<p>2. LACDPW</p>
<p>Phase II: School/Park East Driveway at "A" Street (TT 53108), the project applicant shall prepare the traffic signal design plans and secure adequate funds with the Los Angeles County Department of Public Works for the full construction of the traffic signal. The intersection shall be monitored for the installation of the signal once the school is fully occupied with 750 students; and, Phase III: Long Canyon Road at "Y" Street and "A" Street (TT 53108) (design and install), prior to the issuance of the certificate of occupancy for building(s) on the fire station.</p>			<p>3. Concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed</p>
<p>LV 4.7-16. The developer shall use its best efforts to coordinate with the Castaic Union School District (CUSD) in the development of the school's traffic circulation plan and drop-off/pick-up procedures. The Traffic and Lighting Division recommends that a mechanism for enforcement and levying of noncompliance penalties be included in the plan. The traffic circulation plan should include the distribution of informational packets containing the approved drop-off/pick-up procedures to the parents/guardians of students of the school, and trip reduction strategies such as carpooling and increased bus operations, with specific average vehicle ridership goals for students and staff members, to minimize traffic generation in the area.</p>	<p>Applicant (Traffic Engineer)</p>	<p>Approval of traffic circulation plan</p>	<p>1. LACDPW 2. LACDPW 3. Prior to Issuance of Occupancy Permit for the elementary school</p>
<p>LV 4.7-17. The project applicant shall contribute its fair-share of the costs of adding one high occupancy vehicle (HOV) lane to the project. The project applicant shall contribute its fair-share of the costs of adding one high occupancy vehicle (HOV) lane to the project.</p>	<p>Applicant</p>	<p>Receipt of final</p>	<p>1. LACDPW 2. LACDPW 3. Final EIR January 2010</p>

vehicle ("HOV") lane in each direction to the segment of I-5 between Rye Canyon Road and Magic Mountain Parkway consistent with the percentages shown in **Table 4.7-34** of this EIR.

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Share Funding	2. LACDPW
or Bonding	3. Prior to Recordation of the Final Tract Map

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<p>LV 4.7-18. The project applicant shall contribute its fair-share of the costs of adding one HOV lane in each direction to the segment of I-5 between Magic Mountain Parkway and Valencia Boulevard consistent with the percentages shown in Table 4.7-34 of this EIR.</p>	<p>Applicant</p>	<p>Receipt of Fair Share Funding or Bonding</p>	<p>1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map</p>
<p>LV 4.7-19. The project applicant shall contribute its fair-share of the costs of adding one HOV lane in each direction to the segment of I-5 between Valencia Boulevard and McBean Parkway consistent with the percentages shown in Table 4.7-34 of this EIR.</p>	<p>Applicant</p>	<p>Receipt of Fair Share Funding or Bonding</p>	<p>1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map</p>
<p>LV 4.7-20. The project applicant shall contribute its fair-share of the costs of adding one HOV lane in each direction to the segment of I-5 between Pico Canyon Road/Lyons Avenue and Calgrove Avenue consistent with the percentages shown in Table 4.7-34 of this EIR.</p>	<p>Applicant</p>	<p>Receipt of Fair Share Funding or Bonding</p>	<p>1. LACDPW 2. LACDPW 3. Prior to Recordation of Final Tract Map</p>
<p>LV 4.7-21. Concurrent with issuance of the first building permit for Landmark Village, the project applicant shall submit a one-time payment of \$300,000 to the City of Fillmore (City) in Ventura County to fund transportation-related improvements in the City consistent with the March 2000 agreement entered into between The Newhall Land and Farming Company and the City. <i>(This measure implements in part the provisions of Specific Plan mitigation measure SP 4.8-9.)</i></p>	<p>Applicant</p>	<p>Payment of Fees</p>	<p>1. LACDPW 2. LACDPW 3. Concurrent with first Landmark Village building permit</p>
<p>LV-4.7-22. Concurrent with the issuance of each Newhall Ranch Specific Plan building permit, the project applicant shall pay to the County of Ventura that development's pro-rata share of the entire Newhall Ranch Specific Plan's fair-share (nine percent, or 1 percent in the case of Landmark Village [130 ADT of 11,000]) of the costs to implement the following roadway improvements at the intersection of Center Street and Telegraph Road (SR-126) in the Ventura County community of Piru: (1) Install channelizers and extension striping to prevent left-turn movements from Center Street to eastbound SR-126; (2) Add a westbound right turn deceleration lane to Telegraph Road; and (3) Install a traffic signal at the intersection when warranted. <i>(This measure implements in part the provisions of Specific Plan mitigation measure SP 4.8-9.)</i></p>	<p>Applicant</p>	<p>Payment of Fees</p>	<p>1. LACDPW 2. LACDPW 3. Concurrent with first building permit</p>
<p>4.8 NOISE</p>			
<p>SP 4.9-1. All construction activity occurring on the Newhall Ranch Specific Plan site shall adhere to the requirements of the <i>County of Los Angeles Construction Equipment Noise Standards</i>, County of Los Angeles Ordinance No. 11743, §12.08.440 as identified in Table 4.9-3.</p>	<p>Applicant (Construction Contractor)</p>	<p>Include Measure in Specifications Field Verification</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. During Grading and Construction Activities</p>
<p>SP 4.9-2. Limit all construction activities near occupied residences to between the hours of 6:30 AM and 8:00 PM, and exclude all Sundays and legal holidays pursuant to County Department of Public Works, Construction Division standards.</p>	<p>Applicant (Construction Contractor)</p>	<p>Include Measure in Specifications Field Verification</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. During Grading and Construction Activities</p>

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<p>SP 4.9-3. When construction operations occur adjacent to occupied residential areas, implement appropriate additional noise reduction measures that include changing the location of stationary construction equipment, shutting off idling equipment, notifying adjacent residences in advance of construction work, and installing temporary acoustic barriers around stationary construction noise sources.</p>	<p>Applicant (Construction Contractor)</p>	<p>Include Measure in Specifications Field Verification and</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. During Grading and Construction Activities</p>
<p>SP 4.9-4. Locate construction staging areas on site to maximize the distance between staging areas and occupied residential areas.</p>	<p>Applicant (Construction Contractor)</p>	<p>Include Measure in Specifications Field Verification</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. During Grading and Construction Activities</p>
<p>SP 4.9-5. Where new single family residential buildings are to be constructed within an exterior noise contour of 60 dB(A) (decibels measured on an A-weighted scale) CNEL (Community Noise Equivalent Level) or greater, or where any multi-family buildings are to be constructed within an exterior noise contour of 65 dB(A) CNEL or greater, an acoustic analysis shall be completed prior to approval of building permits. The acoustical analysis shall show that the building is designed so that interior noise levels resulting from outside sources will be no greater than 45 dB(A) CNEL.</p>	<p>Applicant</p>	<p>Receipt and Review of Acoustical Analysis</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to the Issuance of Building Permits</p>
<p>SP 4.9-6. For single-family residential lots located within the 60 dB(A) CNEL or greater noise contour, an acoustic analysis shall be submitted prior to tentative approval of the subdivision. The acoustic analysis shall show that exterior noise in outdoor living areas (e.g., back yards, patios, etc.) will be reduced to 60 dB(A) CNEL or less. <i>(The noise impacts analysis presented in this EIR Section 4.8, and the accompanying noise calculations presented in Appendix 4.8, provide the acoustic analysis required by this mitigation measure.)</i></p>	<p>Applicant</p>	<p>Receipt and Review of Acoustical Analysis</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Tentative Approval of Subdivision</p>
<p>SP 4.9-7. For multi-family residential lots located within the 65 dB(A) CNEL or greater noise contour, an acoustic analysis shall be submitted prior to tentative approval of the subdivision. The acoustic analysis shall show that exterior noise in outdoor living areas (e.g., back yards, patios, etc.) will be reduced to 65 dB(A) CNEL or less. <i>(The noise impacts analysis presented in this EIR Section 4.8, and the accompanying noise calculations presented in Appendix 4.8, provide the acoustic analysis required by this mitigation measure.)</i></p>	<p>Applicant</p>	<p>Receipt and Review of Acoustical Analysis</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Tentative Approval of Subdivision</p>
<p>SP 4.9-8. For school sites located within the 70 dB(A) CNEL or greater noise contour, an acoustic analysis shall be submitted prior to tentative approval of the subdivision. The acoustic analysis shall show that noise at exterior play areas will be reduced to 70 dB(A) CNEL or less. <i>(The noise impacts analysis presented in this EIR Section 4.8, and the accompanying noise calculations presented in Appendix 4.8, provide the acoustic analysis required by this mitigation measure.)</i></p>	<p>Applicant</p>	<p>Receipt and Review of Acoustical Analysis</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Tentative Approval of Subdivision</p>

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<p>SP 4.9-9. All residential air conditioning equipment installed within the Newhall Ranch Specific Plan site shall adhere to the requirements of the <i>County of Los Angeles Residential Air Conditioning and Refrigeration Noise Standards</i>, County of Los Angeles Ordinance No. 11743, §12.08.530.</p>	<p>Building Contractor</p>	<p>Field Verification</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to the Issuance of Occupancy Permits</p>
<p>SP 4.9-10. All stationary and point sources of noise occurring on the Newhall Ranch Specific Plan site shall adhere to the requirements of the County of Los Angeles Ordinance No. 11743, §12.08.390 as identified in Table 4.9-2, County of Los Angeles Exterior Noise Standards for Stationary and Point Noise Sources.</p>	<p>Future Owners/ Operators within project</p>	<p>Field Verification</p>	<p>1. LA County Department of Health Services 2. LA County Department of Building and Safety 3. During Life of Project</p>
<p>SP 4.9-11. Loading, unloading, opening, closing, or other handling of boxes, crates, containers, building materials, garbage cans or similar objects between the hours of 10:00 PM and 6:00 AM in such a manner as to cause a noise disturbance is prohibited in accordance with the County of Los Angeles Ordinance No. 11743, §12.08.460.</p>	<p>Future Owners/ Operators within project</p>	<p>Field Verification</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. During Life of Project</p>
<p>SP 4.9-12. Loading zones and trash receptacles in commercial and Business Park areas shall be located away from adjacent residential areas, or provide attenuation so that noise levels at residential uses do not exceed the standards identified in §12.08.460 of the Ordinance No. 11743.</p>	<p>Applicant</p>	<p>Plan Check Field Verification</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Approval of Final Maps or improvement/building plans and Verify Prior to Issuance of Occupancy Permits</p>
<p>SP 4.9-13 Where residential lots are located with direct lines of sight to the Magic Mountain Theme Park, an acoustic analysis shall be submitted to show that exterior noise on the residential lots generated by activities at the park do not exceed the standards identified in Section 12.08.390 of the Ordinance No. 11743 as identified in Table 4.9-2, County of Los Angeles Exterior Noise Standards for Stationary and Point Noise Sources. <i>(This mitigation measure is not applicable to the Landmark Village project because the project does not include lots located with direct lines-of-sight to the Magic Mountain Theme Park.)</i></p>	<p>Not Applicable</p>		

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<p>SP 4.9-14. After the time that occupancy of uses on the Newhall Ranch Specific Plan site occurs, AND when noise levels at the Travel Village RV Park reach 70 dB(A) CNEL at locations where recreational vehicles are inhabited, the applicant shall construct a noise abatement barrier to reduce noise levels at the RV Park to 70 dB(A) CNEL or less.</p>	<p>Applicant</p>	<p>Receipt and Review of Acoustical Analysis Field Verification</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Upon Occupancy of Uses on Newhall Ranch and if/when noise levels in Travel Village reach 70 dB(A) CNEL</p>
<p>SP 4.9-15. Despite the absence of a significant impact, applicants for all building permits of Residential, Mixed-Use, Commercial, and Business Park land uses (Project) shall pay to the Santa Clara Elementary School District, prior to issuance of building permits, the project's pro rata share of the cost of a sound wall to be located between SR-126 and the Little Red School House. The project's pro rata share shall be determined by multiplying the estimated cost of the sound wall by the ratio of the project's estimated contribution of average daily trips on SR-126 (ADT) at the Little Red School House (numerator) to the total projected cumulative ADT increase at that location (denominator). The total projected cumulative ADT increase shall be determined by subtracting the existing trips on SR-126 from the projected cumulative trips as shown in Table 1 of Topical Response 5 – Traffic Impacts to State and Local Roads in Ventura County after adding the total Newhall Ranch ADT traveling west of the City of Fillmore.</p>	<p>Applicants for all Building Permits</p>	<p>Payment to Santa Clara Elementary School District</p>	<p>1. LACDRP</p>
<p>(Prior to the issuance of building permits for Landmark Village, the project applicant shall calculate and pay to the Santa Clara Elementary School District the pro-rata share of the cost to construct the subject sound wall.) See, EIR Section 4.5, which determined that the Landmark Village project at buildout in 2013 would generate 105 ADTs on SR-126 at the Little Red School House (EIR Table 4.7-22). Section 4.5 also determined that the <u>buildout</u> 2010 ADT on SR-126 at the Little Red School House would be 35,000 (EIR Table 4.7-22).</p>			<p>2. LACDPW, Building and Safety 3. Upon Issuance of Building Permits</p>

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<p>SP 4.9-16. Despite the absence of a significant impact, the applicant for all building permits of Residential, Mixed-Use, Commercial and Business Park land uses (Project) shall participate on a fair-share basis in noise attenuation programs developed and implemented by the City of Moorpark to attenuate vehicular noise on SR-23 just north of Casey Road for the existing single-family homes which front SR-23. The mitigation criteria shall be to reduce noise levels to satisfy state noise compatibility standards. The project's pro rata share shall be determined by multiplying the estimated cost of attenuation by the ratio of the project's estimated contribution of average daily trips on SR-23 (ADT) north of the intersection of SR-23 and Casey Road (numerator) to the total projected cumulative ADT increase at that location (denominator).</p>		<p>Payment to City of Moorpark</p>	<p>1. LACDRP</p>
<p>The total projected cumulative ADT increase shall be determined by subtracting the existing trips on SR-23 north of Casey Road from the projected cumulative trips as shown in Topical Response 5 – Traffic Impacts to State and Local Roads in Ventura County after adding the total Newhall Ranch ADT traveling south of the City of Fillmore. (Prior to the issuance of building permits for Landmark Village, the project applicant shall calculate and pay to the City of Moorpark noise attenuation program the project's pro rata share of the estimated cost of attenuation.) See, EIR Section 4.7, which determined that the Landmark Village project at buildout in 2010 <u>2013</u> would generate 10 ADTs on SR-23 north of Casey Road (EIR Table 4.7-22). Section 4.7 also determined that the 2010 <u>2013</u> ADT on SR-23 at north of Casey Road would be 8,000 (EIR Table 4.7-22).</p>			<p>2. LACDPW, Building and Safety</p> <p>3. Upon Issuance of Building Permits</p>
<p>SP 4.9-17 Prior to the approval of any subdivision map which permits construction within the Specific Plan area, the applicant for that map shall prepare an acoustical analysis assessing project and cumulative development (including an existing plus project analysis, and an existing plus cumulative development analysis including the project). The acoustical analysis shall be based upon state noise land use compatibility criteria and shall be approved by the Los Angeles County Department of Health Services. <i>(Section 4.8 of this EIR and the accompanying noise calculations (Recirculated Draft EIR Appendix 4.8) provide the acoustical analysis required by this mitigation measure.)</i></p> <p>In order to mitigate any future impacts resulting from the project's contribution to significant cumulative noise impacts to development in existence as of the adoption of the Newhall Ranch Specific Plan and caused by vehicular traffic on off-site roadways, the applicant for building permits of Residential, Mixed-Use, Commercial, Visitor Serving and Business Park land uses shall, prior to issuance of building permits, pay a fee to Los Angeles County, Ventura County, the City of Fillmore or the City of Santa Clarita. The amount of the fee shall be the project's fair-share under any jurisdiction-wide or Santa Clarita Valley-wide noise programs adopted by any of the above jurisdictions. <i>(This mitigation measure is not applicable to the Landmark Village project because the project site does not contribute to significant unmitigated cumulative noise impacts and no jurisdiction-wide noise programs have been adopted by the County.)</i></p>	<p>Not Applicable</p>		

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<p>LV 4.8-1. The project applicant, or its designee, shall not undertake construction activities that can generate noise levels in excess of the County's Noise Ordinance on Sundays or legal holidays.</p>	<p>Applicant (Construction Contractor)</p>	<p>Include Measure in Specifications Field</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. During Grading</p>
<p>LV 4.8-2. When construction operations occur in close proximity to on- or off-site occupied residences, and if it is determined by County staff during routine construction site inspections that the construction equipment could generate a noise level at the residences that would be in excess of the Noise Ordinance, the project applicant or its designee shall implement appropriate additional noise reduction measures. These measures shall include, among other things, changing the location of stationary construction equipment, shutting off idling equipment, notifying residents in advance of construction work, and installing temporary acoustic barriers around stationary construction noise sources.</p>	<p>Applicant (Construction Contractor)</p>	<p>Field Verification With Noise Monitor</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. During Grading During Construction Activities</p>
<p>LV 4.8-3. Prior to construction of the utility corridor north of the Travel Village RV Park, the project applicant or its designee shall erect solid construction and continuous temporary noise barriers south of the utility corridor north of the RV Park without blocking ingress/egress at the Park. Prior to issuance of the construction permit for the utility corridor, a qualified acoustic consultant shall be retained to specify the placement and height of the noise barriers in order to maximize their effectiveness in attenuating noise levels. Construction activities north of the RV Park shall comply with the Los Angeles County Noise Ordinance; stationary construction equipment shall be placed as far away from occupied spaces within the RV Park, and equipment shall not be permitted to idle. A qualified acoustic consultant shall be retained to monitor construction noise once a month at occupied RV spaces to ensure noise levels are in compliance with the County's Noise Ordinance for the duration of the construction.</p>	<p>Applicant (Construction Contractor and Project Acoustic Consultant)</p>	<p>Field Verification With Noise Monitor</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to issuance of a construction permit and during construction of the utility corridor north of the Travel Village RV Park</p>
<p>LV-4.8-4 To the extent feasible, in lieu of conventional pile driving, the project developer shall utilize cast-in-place drilled-hole piles, or hydrohammer pile driving equipment with noise reduction, or an alternative methodology that would achieve equivalent noise level reductions, in lieu of pile driving if residential units are constructed in those circumstances in which pile-driving activities would occur within 5,000 feet of sensitive receptors. the Long Canyon Bridge prior to any pile driving activity.</p>	<p>Applicant (Construction Contractor)</p>	<p>Field Verification</p>	<p>1. LA County Department of Health Services</p>
<p>Pile drilling is an alternate method of pile installation where a hole is drilled into the ground up to the required depth elevations and concrete is then cast into it. The estimated noise level of pile drilling at 50 feet is 80 to 95 dB(A) Equivalent Continuous Noise Level (Leq) compared to 90 to 105 dB(A) Leq for of conventional pile driving.[1] Therefore, pile drilling generally produces noise levels approximately 10 to 15 decibels lower than pile driving. (Revisions to the VTTM/Final Site Plan may ultimately require modifications to the mitigation measure and the referenced lotting including the height and location of berms and walls.) <u>Hydrohammer pile driving equipment uses an enclosed hydraulically driven hammer with noise reduction. Noise can be reduced to less than 80 dB(A) at 25 feet, 70 dB(A) at 80 feet, 65 dB(A) at 150 feet, and 60 dB(A) at 250 feet.</u></p>			<p>2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permit</p>

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<p>LV 4.8-5. To mitigate noise impacts on Lots 8 to 12 and Lots 20 to 24 from traffic along "A" Street, the project applicant or its designee shall, prior to occupancy, construct a minimum 6-foot wall along the northern property lines of these lots. <i>(Revisions to the VTTM/Final Site Plan may ultimately require modifications to the mitigation measure and the referenced lotting including the height and location of berms and walls.)</i></p>	<p>Applicant (Construction Contractor)</p>	<p>Field Verification</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit</p>
<p>LV 4.8-6. To mitigate noise impacts on Lots 115 to 128, 146 to 152, 188, and 313 from traffic along "A" Street, the project applicant or its designee shall, prior to occupancy, construct a minimum 5-foot wall along the northern property lines of these lots. The 5-foot wall shall wrap around the entire length of the eastern boundary of Lot 152. <i>(Revisions to the VTTM/Final Site Plan may ultimately require modifications to the mitigation measure and the referenced lotting including the height and location of berms and walls.)</i></p>	<p>Applicant (Construction Contractor)</p>	<p>Field Verification</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit</p>
<p>LV 4.8-7. To mitigate noise impacts on Lots 325, 326, 349, and 350 (condominiums and apartments east of Wolcott Road) from traffic along SR-126, the project applicant or its designee shall, prior to occupancy, construct a 7-foot berm/solid wall at top of slope along northern edge of Lots 326, 325, 349 and 350, to the northwestern corner of Lot 349. The berm/wall shall be continuous with no breaks or gaps. <i>(Revisions to the VTTM/Final Site Plan may ultimately require modifications to the mitigation measure and the referenced lotting including the height and location of berms and walls.)</i></p>	<p>Applicant (Construction Contractor)</p>	<p>Field Verification</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit</p>
<p>LV 4.8-8. To mitigate noise impacts on Lots 343 and 377 (condominium) and on Lot 376 (apartment east of Long Canyon Road) from SR-126, the project applicant or its designee shall, prior to occupancy, construct an 8-foot berm/solid wall along the northern edge of Lots 380, 381, 379, and 360. The berm/wall shall be continuous with no openings or gaps. <i>(Revisions to the VTTM/Final Site Plan may ultimately require modifications to the mitigation measure and the referenced lotting including the height and location of berms and walls.)</i></p>	<p>Applicant (Construction Contractor)</p>	<p>Field Verification</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit</p>
<p>LV 4.8-9. Prior to occupancy of Lot 346 (condominiums west of Wolcott Road), the project applicant or its designee, shall construct an 8-foot berm/solid wall along the eastern boundary of Lot 346 to mitigate delivery truck traffic noise from Lot 347 (mixed use commercial). <i>(Revisions to the VTTM/Final Site Plan may ultimately require modifications to the mitigation measure and the referenced lotting including the height and location of berms and walls.)</i></p>	<p>Applicant (Construction Contractor)</p>	<p>Field Verification</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit</p>
<p>LV-4.8-10. To mitigate noise impacts on Lot 346 (condominiums west of Wolcott Road) from SR-126 the project applicant or its designee shall, prior to occupancy, construct a 10-foot berm/solid wall along the northern edge of Lot 346 from its northeastern corner to a point approximately 325 feet to the west along the lot line. From this point, a 10-foot berm/solid wall shall be constructed through Lot 383 (open space) to the edge of the Caltrans right-of-way where the wall shall continue westerly to the northwestern corner of Open Space Lot 383. The wall shall be continuous with no openings or gaps. <i>(Revisions to the VTTM/Final Site Plan may ultimately require modifications to the mitigation measure and the referenced lotting including the height and location of berms and walls.)</i></p>	<p>Applicant (Construction Contractor)</p>	<p>Field Verification</p>	<p>1. LA County Department of Health Services, Caltrans 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit</p>

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<p>LV-4.8-11. Prior to occupancy of Lot 346 (condominiums west of Wolcott Road), the project applicant or its designee, shall construct an 8-foot berm/solid wall along the eastern boundary of Lot 346 to mitigate delivery truck traffic noise from Lot 347 (mixed use commercial). <i>(Revisions to the VTTM/Final Site Plan may ultimately require modifications to the mitigation measure and the referenced lotting including the height and location of berms and walls.)</i></p>	<p>Applicant (Construction Contractor)</p>	<p>Field Verification</p>	<p>1. LA County Department of Health Services, Caltrans 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit</p>
<p>LV-4.8-12. To mitigate delivery truck and other noises from the commercial center west of Long Canyon Road on Lot 354 (apartments west of Long Canyon Road), the project applicant or its designee shall, prior to occupancy, construct an 8-foot berm/solid wall along the eastern perimeter of Lot 354. <i>(Revisions to the VTTM/Final Site Plan may ultimately require modifications to the mitigation measure and the referenced lotting including the height and location of berms and walls.)</i></p>	<p>Applicant (Construction Contractor)</p>	<p>Field Verification</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit</p>
<p>LV-4.8-13. To mitigate noise impacts on Lot 354 (apartments west of Long Canyon Road) from SR-126, the project applicant or its designee shall, prior to occupancy, construct a 9-foot berm/solid wall along the northern boundary of Lot 354, and along the northern 200 feet of the western lot line. To preserve views of the Santa Clara River, 5/8-inch Plexiglas or transparent material with equivalent or better acoustic value may be incorporated into the wall design. In lieu of constructing the 9-foot berm/solid wall, the parcel shall be developed so that frequent use areas, including balconies, are placed toward the interior of the lot and fully shielded from noise from SR-126 by the apartment structure. <i>(Revisions to the VTTM/Final Site Plan may ultimately require modifications to the mitigation measure and the referenced lotting including the height and location of berms and walls.)</i></p>	<p>Applicant (Construction Contractor)</p>	<p>Field Verification</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit</p>
<p>LV-4.8-14. To mitigate noise impacts on Lot 376 (apartments east of Long Canyon Road) from delivery truck and other noise from the commercial center proposed east of Long Canyon Road, the project applicant or its designee shall, prior to occupancy, construct an 8-foot berm/solid wall along the western boundary of Lot 376. <i>(Revisions to the VTTM/Final Site Plan may ultimately require modifications to the mitigation measure and the referenced lotting including the height and location of berms and walls.)</i></p>	<p>Applicant (Project Acoustic Consultant)</p>	<p>Field Verification</p>	<p>1. LA County Department of Health Services, Caltrans 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit</p>
<p>LV-4.8-15. Residences within mixed-use commercial areas shall be discouraged within 500 feet of the centerline of SR-126. Residences that do occur within mixed use commercial lots shall be set back as far as possible from SR-126, Wolcott Road, Long Canyon Road, and "A" Street in order to minimize the need for acoustic insulation of the units. When the plot plan for the commercial center is complete, acoustic analyses shall be conducted by a qualified acoustic consultant to ensure that interior noise levels of any residences within the commercial center can be feasibly reduced to 45 dB(A).</p>	<p>Applicant (Project Acoustic Consultant)</p>	<p>Receipt and Review of Noise Impact Analysis</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Commercial Center Building Permit</p>

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<p>LV-4.8-16. Balconies with direct lines of sight to SR-126, Wolcott Road, Long Canyon Road, and/or "A" Street shall be discouraged from exposure to exterior noise levels greater than the 60 dB(A) CNEL standard for single-family residences or the 65 dB(A) CNEL standard for multi-family residences through architectural or site design. Alternatively, balconies shall be enclosed by solid noise barriers, such as 3/8-inch glass or 5/8-inch Plexiglas to a height specified by a qualified noise consultant.</p>	<p>Applicant (Project Acoustic Consultant and Construction Contractor)</p>	<p>Building Plan Check</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permit</p>
<p>LV-4.8-17. All single-family and multi-family structures, including multi-family units incorporated into commercial centers, within 500 feet of SR-126 and all residential units with direct lines of sight to SR-126, Wolcott Road, Long Canyon Road, and/or "A" Street shall incorporate the following into the exterior wall that faces onto those roadways:</p>	<p>Applicant</p>	<p>Building Plan Check</p>	<p>1. LA County Department of Health Services</p>
<p>(a) All windows, both fixed and operable, shall consist of either double-strength glass or double-paned glass. All windows facing sound waves generated from the mobile source noise shall be manufactured and installed to specifications that prevent any sound from window vibration caused by the noise source.</p>			<p>2. LACDPW, Building and Safety</p>
<p>(b) Doors shall be solid core and shall be acoustically designed with gasketed stops and integral drop seals. (b) Doors shall be solid core and shall be acoustically designed with gasketed stops and integral drop seals. (c) If necessitated by the architectural design of a structure, special insulation or design features shall be installed to meet the required interior ambient noise level.</p>			<p>3. Prior to Issuance of Building Permit</p>
<p>LV-4.8-18. Air conditioning units shall be installed to serve all living areas of all residences incorporated into commercial centers, and those with direct lines of sight to SR-126, and/or "A" Street so that windows may remain closed without compromising the comfort of the occupants.</p>	<p>Applicant (Construction Contractor)</p>	<p>Review of Field verification</p>	<p>1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit</p>
<p>4.9 AIR QUALITY</p>			
<p>SP 4.10-1. The Specific Plan will provide Commercial and Service uses in close proximity to residential subdivisions. (<i>The Landmark Village project provides Commercial and Service Uses in close proximity to residential subdivisions</i>).</p>	<p>Applicant</p>	<p>Approval of Tentative Maps</p>	<p>1. LACDRP 2. LACDRP 3. Prior to Tentative Subdivision Map Approvals</p>
<p>SP 4.10-2. The Specific Plan will locate residential uses in close proximity to Commercial uses, Mixed-Uses, and Business Parks. (<i>The Landmark Village project locates residential uses in close proximity to Commercial Uses and Mixed Uses</i>).</p>	<p>Applicant</p>	<p>Approval of Tentative Maps</p>	<p>1. LACDRP 2. LACDRP 3. Prior to Tentative Subdivision Map Approvals</p>

8.0 Mitigation Monitoring Plan

<p>SP 4.10-3. Bus pull-ins will be constructed throughout the Specific Plan site. <i>(The Landmark Village project provides for bus pull-ins at designated locations).</i></p>	<p>Applicant</p>	<p>Final Highway Plan Check</p>	<p>1. LACDPW 2. LACDPW 3. Prior to Tentative Subdivision Map Approvals</p>
<p>SP 4.10-4. Pedestrian facilities, such as sidewalks, and community regional, and local trails, will be provided throughout the Specific Plan site. <i>(Pedestrian facilities, such as sidewalks, bike paths, and trails, will be constructed throughout the Landmark Village project, with future connections to other on-site and off-site future developments and designated trails).</i></p>	<p>Applicant</p>	<p>Submittal of Tentative Maps</p>	<p>1. LACDRP 2. LACDRP 3. Prior to Tentative Subdivision Map Approvals</p>
<p>SP 4.10-5. Roads with adjacent trails for pedestrian and bicycle use will be provided throughout the Specific Plan site connecting the individual Villages and community. <i>(Roads with adjacent trails for pedestrian and bicycle use will be provided throughout the Landmark Village project site with future connections to future developments within Newhall Ranch)</i></p>	<p>Applicant</p>	<p>Submittal of Tentative Maps</p>	<p>1. LACDRP 2. LACDRP 3. Prior to Tentative Subdivision Map Approvals</p>
<p>SP 4.10-6. <u>This mitigation measure has been replaced by measure LV 4.9-5.</u> The applicant of future subdivisions shall implement all rules and regulations adopted by the Governing Board of the Southern California Air Quality Management District (SCAQMD) which are applicable to the development of the subdivision (such as Rule 402 - Nuisance, Rule 403 - Fugitive Dust, Rule 1113 - Architectural Coatings) and which are in effect at the time of development. The purpose of Rule 403 is to reduce the amount of particulate matter entrained in the ambient air as a result of man-made fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or man-made condition capable of generating fugitive dust such as the mass and remedial grading associated with the project as well as weed abatement and stockpiling of construction materials (i.e., rock, earth, gravel). Rule 403 requires that grading operations either (1) take actions specified in Tables 1 and 2 of the Rule for each applicable source of fugitive dust and take certain notification and record keeping actions; or (2) obtain an approved Fugitive Dust Control Plan. A complete copy of the SCAQMD's Rule 403 Implementation Handbook, which has been included in Appendix 4.10, provides guideline tables to demonstrate the typical mitigation program and record keeping required for grading operations (Tables 1 and 2 and sample record keeping chart). The record keeping is accomplished by on-site construction personnel, typically the construction superintendent.</p>	<p>Applicant</p>	<p>Plan Check Review and apply applicable rules as part of environmental document</p>	<p>1. LACDRP</p>
<p>Each future subdivision proposed in association with the Newhall Ranch Specific Plan shall implement the following if found applicable and feasible for that subdivision.</p>			<p>2. LACDRP</p>

- a. Configure construction parking to minimize traffic interference.
- b. Provide temporary traffic controls when construction activities have the potential to disrupt traffic to maintain traffic flow (e.g., signage, flag person, detours).
- c. Schedule construction activities that affect traffic flow to off-peak hours (e.g., between 7:00 PM and 6:00 AM and between 10:00 AM and 3:00 PM).
- d. Develop a trip reduction plan to achieve a 1.5 average vehicle ridership (AVR) for construction employees.
- e. Implement a shuttle service to and from retail services and food establishments during lunch hours.
- f. Develop a construction traffic management plan that includes the following measures to address construction traffic that has the potential to affect traffic on public streets:
 - Rerouting construction traffic off congested streets;
 - Consolidating truck deliveries; and
 - Providing temporary dedicated turn lanes for movement of construction trucks and equipment on and off of the site.
- g. Prohibit truck idling in excess of two minutes.

OFF-ROAD MOBILE SOURCE CONSTRUCTION EMISSIONS:

- h. Use methanol-fueled pile drivers. (Infeasible as written due to the present market for alternative fuels for use in construction equipment. Revised to provide greater flexibility in the selection of alternative fuel types.)
- i. Suspend use of all construction equipment operations during second stage smog alerts.
- j. Prevent trucks from idling longer than two minutes.
- k. Use electricity from power poles rather than temporary diesel-powered generators.
- l. Use electricity from power poles rather than temporary gasoline-powered generators.
- m. Use methanol- or natural gas-powered mobile equipment instead of diesel. (Infeasible as written due to the present market for alternative fuels for use in construction equipment. Revised to provide greater flexibility in the selection of alternative fuel types.)
- n. Use propane- or butane-powered on-site mobile equipment instead of gasoline. (Infeasible as written due to the present market for alternative fuels for use in construction equipment. Revised to provide greater flexibility in the selection of alternative fuel types.)

(As discussed above, for purposes of the Landmark Village project, Specific Plan mitigation measure 4.10-7 is replaced by project specific mitigation measure LV 4.9-6.)

SP 4.10-8. The applicant of future subdivisions shall implement all rules and regulations adopted by the Governing Board of the SCAQMD which are applicable to the development of the subdivision (such as Rule 402 – Nuisance, Rule 1102 – Petroleum Solvent Dry Cleaners, Rule 1111 – Oxides of Nitrogen (NO_x) Emissions from Natural Gas-Fired, Fan-Type Central Furnaces, Rule 1146 – Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters) and which are in effect at the time of occupancy permit issuance.

8.0 Mitigation Monitoring Plan

3. Prior to Tentative Subdivision Map Approvals

Applicant

Field Verification and review and include applicable and feasible rules as part of

1. LACDRP
2. LACDRP

3. Prior to Tentative Subdivision Map Approvals

		<i>8.0 Mitigation Monitoring Plan</i>	
<p>SP 4.10-9. <u>This mitigation measure has been replaced by measure LV 4.9-8.</u> Prior to the approval of each future subdivision proposed in association with the Newhall Ranch Specific Plan, each of the operational emission reduction measures indicated below (and in Tables 11-6 and 11-7 of the SCAQMD's <i>CEQA Air Quality Handbook</i>, as amended) shall be implemented if found applicable and feasible for that subdivision. Tables of currently applicable measures are provided for reference in Appendix 4.10.</p>	Applicant	Field	1. LACDRP
<p>On-Road Mobile Source Operational Emissions:</p>		Verification and review and include applicable and feasible rules as part of environmental document	2. LACDRP
<p>Residential Uses</p> <p>a. Include satellite telecommunications centers in residential subdivisions (Removed <u>No longer applicable as growth of internet allows residents to telecommute from home using personal computers.</u>) b. Establish a shuttle service from residential subdivisions to commercial core areas. (Infeasible as written; shuttle services to be provided by commercial uses and public transit.)</p> <p>c. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters).</p> <p>d. Construct off-site pedestrian facility improvements, such as overpasses and wider sidewalks.</p> <p>e. Include retail services within or adjacent to residential subdivisions.</p> <p>f. Provide shuttles to major rail transit centers or multi-modal stations. (Infeasible as written; shuttle services to be provided by commercial uses and public transit.)</p> <p>g. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.).</p> <p>h. Synchronize traffic lights on streets impacted by development.</p> <p>i. Construct, contribute, or dedicate land for the provision of off-site bicycle trails linking the facility to designated bicycle commuting routes.</p> <p>Commercial Uses</p> <p>j. Provide preferential parking spaces for carpools and vanpools and provide 7-foot, 2-inch minimum vertical clearance in parking facilities for vanpool access.</p> <p>k. Implement on-site circulation plans in parking lots to reduce vehicle queuing.</p>			3. Prior to Tentative Subdivision Map Approvals

l. Improve traffic flow at drive-throughs by designing separate windows for different functions and by providing temporary parking for orders not immediately available for pickup.

m. Provide video-conference facilities. (No longer applicable as growth of internet allows employees to attend videoconference from home using personal computers.)

n. Set up resident worker training programs to improve job/housing balance.o. Implement home dispatching system where employees receive routing schedule by phone instead of driving to work. (No longer applicable as growth of internet allows employees to attend videoconference from home using personal computers.)

o. Implement home dispatching system where employees receive routing schedule by phone instead of driving to work. (No longer applicable as growth of internet allows employees to attend videoconference from home using personal computers.)

p. Develop a program to minimize the use of fleet vehicles during smog alerts (for business not subject to Regulation XV (now Rule 2202) or XII). *(Not applicable to Landmark Village project as the commercial uses to be developed in this subdivision will be neighborhood supporting uses that do not utilize commercial vehicle fleets.)*

q. Use low-emissions fleet vehicles:

- TLEV
- ULEV
- LEV
- ZEV

(Not applicable to Landmark Village project as the commercial uses to be developed in this subdivision will be neighborhood supporting uses that do not utilize commercial vehicle fleets.)

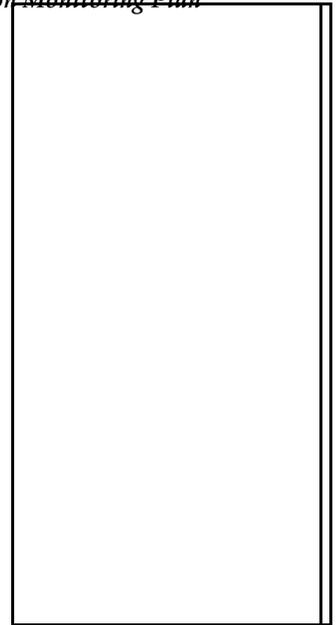
r. Reduce employee parking spaces for those businesses subject to Regulation XV (now Rule 2202). (Rule 2202 applies to employers with more than 250 employees on a single worksite. The Landmark Village project does not include Business Park or similar uses that would generate significant levels of employment at a single location.)

s. Implement a lunch shuttle service from a worksite(s) to food establishments. (Consistent with Rule 2202, this measure applies to employers with more than 250 employees on a single worksite. The Landmark Village project would not include the types of uses that would generate significant levels of employees at a single location. Therefore, this measure is not applicable to Landmark Village.)

8.0 Mitigation Monitoring Plan

- ae. Utilize parking in excess of code requirements as on-site park-n-ride lots or contribute to construction of off-site lots.
- af. Any two of the following:
- Construct off-site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on-site improvements, such as bicycle paths.
 - Include bicycle parking facilities, such as bicycle lockers and racks.
 - Include showers for bicycling employees' use.
- ag. Any two of the following:
- Construct off-site pedestrian facility improvements, such as overpasses, wider sidewalks.
 - Construct on-site pedestrian facility improvements, such as building access which is physically separated from street and parking lot traffic and walk paths.
 - Include showers for pedestrian employees' use.
- ah. Provide shuttles to major rail transit stations and multi-modal centers. (Infeasible as written due to the unlimited scope of shuttle routes.)
- ai. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.).
- aj. Charge visitors to park. (Infeasible as written due to the business implications of establishing parking fees at certain commercial uses (e.g., grocery stores, big-box retailers).)
- ak. Synchronize traffic lights on streets impacted by development.

8.0 Mitigation ~~Monitoring~~ Plan



- al. Reschedule truck deliveries and pickups to off-peak hours.
- am. Set up paid parking systems where drivers pay at walkup kiosk and exit via a stamped ticket to reduce emissions from queuing vehicles.
- an. Require on-site truck loading zones.
- ao. Implement or contribute to public outreach programs.
- ap. Require employers not subject to Regulation XV (now Rule 2202) to provide commuter information
- area.aq. Provide preferential parking spaces for carpools and vanpools and provide 7'2" minimum vertical clearance in parking facilities for vanpool access. *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to preferential parking spaces for carpools and vanpools in Business Park uses. The Landmark Village project does not propose a Business Park.)*
- ar. Implement on-site circulation plans in parking lots to reduce vehicle queuing. *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to improved circulation within Business Park parking lots. The Landmark Village project does not propose a Business Park.)*
- as. Set up resident worker training programs to improve job/housing balance. *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to resident worker training programs for Business Park employees. The Landmark Village project does not propose a Business Park.)*
- at. Implement home dispatching system where employees receive routing schedule by phone instead of driving to work. *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to establishment of home dispatching system for Business Park employees. The Landmark Village project does not propose a Business Park.)*
- au. Develop a program to minimize the use of fleet vehicles during smog alerts (for business not subject to Regulation XV (now Rule 2202) or XII). *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to creation of a program designed to reduce use of vehicle fleets. The Landmark Village project does not propose a Business Park.)*
- av. Use low-emissions fleet vehicles:
 - TLEV
 - ULEV
 - LEV
 - ZEV

8.0 Mitigation Monitoring Plan

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ay. Implement compressed workweek schedules where weekly work hours are compressed into fewer than five days.

- 9/80
- 4/40
- 3/36

(This mitigation measure is not applicable to the Landmark Village project. The measure promotes use of flexible work schedules in Business Park uses. The Landmark Village project does not propose a Business Park.)

az. Offer first right of refusal, low interest loans, or other incentives to employees who purchase or rent local residences. (This mitigation measure has been omitted because it is not applicable to the Landmark Village project. The measure promotes use of incentives to Business Park employees who choose to reside in a local residence. The Landmark Village project does not propose a Business Park.)

ba. Develop a trip reduction plan to achieve 1.5 AVR for businesses with less than 100 employees or multi-tenant worksites. (This mitigation measure is not applicable to the Landmark Village project. The measure promotes use of a trip reduction plan for Business Park users. The Landmark Village project does not propose a Business Park.)

bb. Provide on-site child care and after-school facilities or contribute to off-site development within walking distance. (This mitigation measure is not applicable to the Landmark Village project. The measure promotes on-site childcare in Business Park uses. The Landmark Village project does not propose a Business Park.)

bc. Provide on-site employee services such as cafeterias, banks, etc. (This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to provide on-site employee amenities such as cafeterias or banks. The Landmark Village project does not propose a Business Park.)

bd. Establish a shuttle service from residential core areas to the worksite. (This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to provide shuttle service to residential areas. The Landmark Village project does not propose a Business Park.)

8.0 Mitigation Monitoring Plan

be. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters) *(This mitigation measure is not applicable to the Landmark Village project. The measure requires bus stops in Business Park uses. The Landmark Village project does not propose a Business Park.)*

bf. Implement a pricing structure for single-occupancy employee parking and/or provide discounts to ridesharers. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to encourage ridesharing and discourage travel in single occupancy vehicles. The Landmark Village project does not propose a Business Park.)*

bg. Utilize parking in excess of code requirements as on-site park-n-ride lots or contribute to construction of off-site lots. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to provide parking in excess of code for park and ride lots. The Landmark Village project does not propose a Business Park.)*

bh. Any two of the following:

- Construct off-site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on-site improvements, such as bicycle paths.
- Include bicycle parking facilities, such as bicycle lockers and racks.
- Include showers for bicycling employees' use.

(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to construct on-site improvements that encourage bicycling. The Landmark Village project does not propose a Business Park.)

bi. Any two of the following:

- Construct off-site pedestrian facility improvements, such as overpasses, wider sidewalks.
- Construct on-site pedestrian facility improvements, such as building access that is physically separated from street and parking lot traffic and walk paths.
- Include showers for pedestrian employees' use.

(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to provide pedestrian facility improvements. The Landmark Village project does not propose a Business Park.)

8.0 Mitigation Monitoring Plan

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- bj. Provide shuttles to major rail transit stations and multi-modal centers. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to provide shuttles to transit stations. The Landmark Village project does not propose a Business Park.)*
- bk. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.). *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to contribute towards regional transit improvements. The Landmark Village project does not propose a Business Park.)*
- bl. Synchronize traffic lights on streets impacted by development. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to synchronize traffic signals affected by operation of the park. The Landmark Village project does not propose a Business Park.)*
- bm. Reschedule truck deliveries and pickups to off-peak hours. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to schedule deliveries at off-peak hours. The Landmark Village project does not propose a Business Park.)*
- bn. Implement a lunch shuttle service from a worksite(s) to food establishments. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to implement a lunch shuttle service. The Landmark Village project does not propose a Business Park.)*
- bo. Require on-site truck loading zones. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to provide on-site truck loading zones. The Landmark Village project does not propose a Business Park.)*
- bp. Install aerodynamic add-on devices to heavy-duty trucks. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to install aerodynamic devices on truck fleets. The Landmark Village project does not propose a Business Park.)*
- bq. Implement or contribute to public outreach programs. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to conduct public outreach programs to reduce VMT. The Landmark Village project does not propose a Business Park.)*

8.0 Mitigation Monitoring Plan

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STATIONARY SOURCE OPERATIONAL EMISSIONS

Residential Uses

- br. Use solar or low emission water heaters.
- bs. Use central water heating systems.
- bt. Use built-in energy-efficient appliances.
- bu. Provide shade trees to reduce building heating/cooling needs.
- bv. Use energy-efficient and automated controls for air conditioners.
- bw. Use double-paned windows.
- bx. Use energy-efficient low-sodium parking lot lights.
- by. Use lighting controls and energy-efficient lighting.
- bz. Use fuel cells in residential subdivisions to produce heat and electricity. *(This measure is not yet considered technically or economically feasible. There are presently no commercially available fuel cell applications for individual home use at a reasonable cost.)*
- ca. Orient buildings to the north for natural cooling and include passive solar design (e.g., daylighting).
- cb. Use light-colored roofing materials to reflect heat.
- cc. Increase walls and attic insulation beyond Title 24 requirements.

Commercial Uses

- cd. Use solar or low emission water heaters.
- ce. Use central water heating systems.
- cf. Provide shade trees to reduce building heating/cooling needs.
- cg. Use energy-efficient and automated controls for air conditioners.
- ch. Use double-paned windows.
- ci. Use energy-efficient low-sodium parking lot lights.
- cj. Use lighting controls and energy-efficient lighting.
- ck. Use light-colored roofing materials to reflect heat.
- cl. Increase walls and attic insulation beyond Title 24 requirements.
- cm. Orient buildings to the north for natural cooling and include passive solar design (e.g., daylighting).

8.0 Mitigation Monitoring Plan

<p>cn. Provide shade trees to reduce building heating/cooling needs. <i>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to provide shade trees near structures. The Landmark Village project does not propose a Business Park.)</i></p> <p>co. Use energy-efficient and automated controls for air conditioning. <i>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to use energy efficient air conditioning. The Landmark Village project does not propose a Business Park.)</i></p> <p>cp. Use double-paned windows. <i>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to use energy efficient windows. The Landmark Village project does not propose a Business Park.)</i></p> <p>cq. Use energy-efficient low-sodium parking lot lights. <i>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to use energy efficient parking lot lighting. The Landmark Village project does not propose a Business Park.)</i></p> <p>cr. Use lighting controls and energy-efficient lighting. <i>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to use energy efficient lighting. The Landmark Village project does not propose a Business Park.)</i></p> <p>cs. Use light-colored roofing materials to reflect heat. <i>(This mitigation is not applicable to the Landmark Village project. The measure requires uses within the Business Park to use light color roofing materials. The Landmark Village project does not propose a Business Park.)</i></p> <p>ct. Orient buildings to the north for natural cooling and include passive solar design (e.g., daylighting). <i>(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to orient the structure to account for passive solar design. The Landmark Village project does not propose a Business Park.)</i></p>			
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8.0 Mitigation Monitoring Plan

<p>cu. Increase walls and attic insulation beyond Title 24 requirements. <i>(This mitigation measure has been omitted because it is not applicable to the Landmark Village project. The measure requires uses within the Business Park to increase wall insulation beyond code requirements. The Landmark Village project does not propose a Business Park.)</i></p> <p>cv. Improved storage and handling of source materials. <i>(This mitigation measure has been omitted because it is not applicable to the Landmark Village project. The measure requires uses within the Business Park to improve storage and handling. The Landmark Village project does not propose a Business Park.)</i></p> <p>cw. Materials substitution (e.g., use water-based paints, life-cycle analysis). <i>(This mitigation measure has been omitted because it is not applicable to the Landmark Village project. The measure requires uses within the Business Park to conduct materials substitution in their processes. The Landmark Village project does not propose a Business Park.)</i></p> <p>cx. Modify manufacturing processes (e.g., reduce process stages, closed-loop systems, materials recycling). <i>(This mitigation measure has been omitted because it is not applicable to the Landmark Village project. The measure addresses manufacturing uses within a Business Park. The Landmark Village project does not propose a Business Park.)</i></p> <p>cy. Resource recovery systems that redirect chemicals to new production processes. <i>(This mitigation measure has been omitted because it is not applicable to the Landmark Village project. The measure addresses manufacturing uses within a Business Park. The Landmark Village project does not propose a Business Park.)</i></p> <p><i>(As discussed above, for purposes of the Landmark Village project, Specific Plan mitigation measure SP 4.10-9 is replaced by project specific mitigation measure LV 4.9-8.)</i></p>						
<p>SP 4.10-10. All non-residential development of 25,000 gross square feet or more shall comply with the County’s Transportation Demand Management (TDM) Ordinance (Ordinance No. 93-0028M) in effect at the time of subdivision. The sizes and configurations of the Specific Plan’s non-residential uses are not known at this time and the Ordinance specifies different requirements based on the size of the project under review. All current provisions of the ordinance are summarized in Appendix 4.10.</p>	Applicant	Include Requirement in Future environmental documents	<table border="1"> <tr><td>1. LACDPW</td></tr> <tr><td>2. LACDRP</td></tr> <tr><td>3. Tentative Map Approval or Building Permit, as applicable</td></tr> </table>	1. LACDPW	2. LACDRP	3. Tentative Map Approval or Building Permit, as applicable
1. LACDPW						
2. LACDRP						
3. Tentative Map Approval or Building Permit, as applicable						
<p>SP 4.10-11. Subdivisions and buildings shall comply with Title 24 of the California Code of Regulations which are current at the time of development.</p>	Applicant	Include Requirement in Future environmental documents and/or check at Building Permit	<table border="1"> <tr><td>1. LACDPW, Building and Safety</td></tr> <tr><td>2. LACDPW, Building and Safety</td></tr> <tr><td>3. Tentative Map Approval or Building Permit, as applicable</td></tr> </table>	1. LACDPW, Building and Safety	2. LACDPW, Building and Safety	3. Tentative Map Approval or Building Permit, as applicable
1. LACDPW, Building and Safety						
2. LACDPW, Building and Safety						
3. Tentative Map Approval or Building Permit, as applicable						

8.0 Mitigation Monitoring Plan

<p>SP 4.10-12. Lighting for public streets, parking areas, and recreation areas shall utilize energy efficient light and mechanical, computerized or photo cell switching devices to reduce unnecessary energy usage.</p>	<p>Applicant</p>	<p>Include Requirement in Future environmental documents</p>	<p>1. LACDPW 2. LACDPW 3. Tentative Map Approval or Building Permit, as applicable</p>
<p>SP 4.10-13. Any on-site subterranean parking structures shall provide adequate ventilation systems to disperse pollutants and preclude the potential for a pollutant concentration to occur. <i>(This mitigation measure it is not applicable to the Landmark Village project. The measure addresses ventilation of subterranean parking garages. The Landmark Village project does not propose such parking facilities.)</i></p>			
<p>SP 4.10-14. The sellers of new residential units shall be required to distribute brochures and other relevant information published by the SCAQMD or similar organization to new homeowners regarding the importance of reducing vehicle miles traveled and related air quality impacts, as well as on local opportunities for public transit and ridesharing.</p>	<p>Applicant</p>	<p>LACDRP Review of information package and distribution records</p>	<p>1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Issuance of Building Permit (Package) and Occupancy Permits (Records)</p>
<p>LV 4.9-1. Maintain construction equipment and vehicle engines in good condition and in proper tune as per manufacturers' specifications and per SCAQMD rules, to minimize exhaust emissions.</p>	<p>Applicant (Construction Superintendent)</p>	<p>Field Verification</p>	<p>1. LACDPW 2. LACDPW 3. During Grading</p>
<p>LV 4.9-2. All on-road and off-road construction equipment shall use aqueous fuel, to the extent feasible, as determined by the County of Los Angeles. Aqueous fuel is a stable emulsion of up to 55 percent water and petroleum-based naphtha (a petroleum product from the earliest stages of the refinery process), with trace amounts of bonding and winterizing agents. It can be used to run both gasoline and diesel engines. Aqueous fuel is clean-burning and, based on information provided in the URBEMIS20074 model for its use in construction equipment, it can reduce NOx emissions by <u>154</u>-percent and PM10 emissions, <u>including PM_{2.5}</u> by <u>5063</u> percent.</p>	<p>Applicant (Construction Superintendent)</p>	<p>Field Verification</p>	<p>1. LACDPW 2. LACDPW 3. During Grading</p>

8.0 Mitigation Monitoring Plan

<p>LV 4.9-3. All on-road and off-road construction equipment shall employ cooled exhaust gas recirculation technology, to the extent feasible, as determined by the County of Los Angeles. Cooled exhaust gas recirculation (EGR) reduces CO, VOC, NOx, and PM10, <u>including PM_{2.5}</u>, emissions as follows: Oxygen is required for fuel to be consumed in a combustion engine. The high temperatures found within combustion engines cause nitrogen in the surrounding air to react with any unused oxygen from the combustion process to form NOx. EGR technology directs some of the exhaust gases that have already been used by the engine and no longer contain much oxygen back into the intake of the engine. By mixing the exhaust gases with fresh air, the amount of oxygen entering the engine is reduced. Since there is less oxygen to react with, fewer nitrogen oxides are formed and the amount of nitrogen oxides that a vehicle releases into the atmosphere is decreased. <u>The URBEMIS2007 model does not estimate emissions reductions from EGR. Based on information provided in the URBEMIS2002 model for its use in construction equipment, cooled exhaust gas recirculation technology can reduce CO and VOC emissions by 90 percent, NOx emissions by 40 percent and PM10 emissions by 85 percent.</u></p>	<p>Applicant (Construction Superintendent)</p>	<p>Field Verification</p>	<p>1. LACDPW 2. LACDPW 3. During Grading and Construction</p>
<p>LV 4.9-4. All on-road and off-road construction equipment shall employ diesel particulate filters. <u>Diesel particulate filters which</u> can reduce PM₁₀ emissions from construction equipment by as much as 85 percent based on information provided in the URBEMIS20072 model.</p>	<p>Applicant (Construction Superintendent)</p>	<p>Field Verification</p>	<p>1. LACDPW 2. LACDPW 3. During Grading and Construction</p>
<p><u>LV 4.9-4a On-road construction trucks shall be routed away from sensitive receptor areas.</u></p>	<p>Applicant (Construction Superintendent)</p>	<p>Field Verification</p>	<p>1. LACDPW 2. LACDPW 3. During Grading and Construction</p>
<p><u>LV 4.9-4b Require all on-site construction equipment to meet EPA Tier 2 or higher emissions standards according to the following schedule:</u></p> <ul style="list-style-type: none"> • <u>April 1, 2010, to December 31, 2011: All offroad diesel-powered construction equipment greater than 50</u> • A copy of each unit's certified tier specification, BACT documentation, and CARB or AQMD operating permit shall be provided at the time of mobilization of each applicable unit of equipment. 	<p>Applicant (Construction Superintendent)</p>	<p>Field Verification</p>	<p>1. LACDPW 2. LACDPW 3. During Grading and Construction</p>

LV 4.9-5. (Replaces Mitigation Measure SP 4.10-6) The applicant shall implement all rules and regulations adopted by the Governing Board of the SCAQMD which are applicable to the development of the subdivision (such as Rule 402 – Nuisance, Rule 403 – Fugitive Dust, Rule 1113 – Architectural Coatings) and which are in effect at the time of development. The purpose of Rule 403 is to reduce the amount of particulate matter entrained in the ambient air as a result of man-made fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or man-made condition capable of generating fugitive dust such as the mass and remedial grading associated with the project as well as weed abatement and stockpiling of construction materials (i.e., rock, earth, gravel). Rule 403 requires that grading operations either (1) take actions specified in Tables 1 and 2 of the Rule for each applicable source of fugitive dust and take certain notification and record keeping actions, or (2) obtain an approved Fugitive Dust Control Plan. A complete copy of the SCAQMD’s Rule 403 Implementation Handbook, which has been included in Recirculated Draft EIR Appendix 4.10, provides guideline tables to demonstrate the typical mitigation program and record keeping required for grading operations (Tables 1 and 2 and sample record-keeping chart). The record keeping is accomplished by on-site construction personnel, typically the construction superintendent.

The project applicant or its designee shall implement the following:

Applicant

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<p>Plan Check</p> <p>Review and apply applicable rules as part of environmental document</p>	<p>1. LACDRP</p>
	<p>2. LACDRP</p>

<p><u>GRADING</u></p> <p>a. <u>Apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for ten days or more).</u></p> <p>b. <u>Replace groundcover in disturbed areas as quickly as possible.</u></p> <p>c. <u>Enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications, to exposed piles (i.e., gravel, sand, dirt) with 5 percent or greater silt content.</u></p> <p>d. <u>Water active sites at least twice daily.</u></p> <p>e. <u>Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph.</u></p> <p>f. <u>Monitor for particulate emissions according to District-specified procedures.</u></p> <p>g. <u>All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer) in accordance with the requirements of California Vehicle Code (CVC) Section 23114.</u></p> <p><u>PAVED ROADS</u></p> <p>h. <u>Sweep streets at the end of the day if visible soil material is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water).</u></p> <p>i. <u>Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.</u></p> <p><u>UNPAVED ROADS</u></p> <p>j. <u>Apply water three times daily, or non-toxic soil stabilizers according to manufacturers' specifications, to all unpaved parking or staging areas or unpaved road surfaces.</u></p> <p>k. <u>Reduce traffic speeds on all unpaved roads to 15 mph or less.</u></p> <p>l. <u>Pave construction roads that have a traffic volume of more than 50 daily trips by construction equipment, 150 total daily trips for all vehicles.</u></p> <p>m. <u>Pave all construction access roads at least 100 feet on to the site from the main road.</u></p> <p>n. <u>Pave construction roads that have a daily traffic volume of less than 50 vehicular trips.</u></p>		<p><u>8.0 Mitigation Monitoring Plan</u></p> <p>3. Prior to Tentative Subdivision Map Approvals</p>
<p>Unpaved Roads</p> <p>j. Apply water three times daily, or non-toxic soil stabilizers according to manufacturers' specifications, to all unpaved parking or staging areas or unpaved road surfaces.</p> <p>k. Reduce traffic speeds on all unpaved roads to 15 miles per hour or less.</p> <p>l. Pave construction roads that have a traffic volume of more than 50 daily trips by construction equipment, 150 total daily trips for all vehicles.</p> <p>m. Pave all construction access roads at least 100 feet on to the site from the main road.</p> <p>n. Pave construction roads that have a daily traffic volume of less than 50 vehicular trips.</p>		

		<i>8.0 Mitigation Monitoring Plan</i>		
<p><u>LV 4.9-6. (Replaces Mitigation Measure SP 4.10-7) Prior to the approval of each future subdivision proposed in association with Landmark Village, each of the construction emission reduction measures indicated below, which are based on Tables 11-2 and 11-3 of the SCAQMD's CEQA Air Quality Handbook, shall be implemented:</u></p> <p>ON-ROAD MOBILE SOURCE CONSTRUCTION EMISSIONS:</p> <p><u>a. Configure construction parking to minimize traffic interference.</u></p> <p><u>b. Provide temporary traffic controls when construction activities have the potential to disrupt traffic to maintain traffic flow (e.g., signage, flag person, detours).</u></p> <p><u>c. Schedule construction activities that affect traffic flow to off-peak hours (e.g., between 7:00 PM and 6:00 AM and between 10:00 AM and 3:00 PM).</u></p> <p><u>d. Develop a trip reduction plan to achieve a 1.5 average vehicle ridership (AVR) for construction employees.</u></p> <p><u>e. Implement a shuttle service to and from retail services and food establishments during lunch hours.</u></p> <p><u>f. Develop a construction traffic management plan that includes the following measures to address construction traffic that has the potential to affect traffic on public streets:</u></p> <ul style="list-style-type: none"> <u>- Rerouting construction traffic off congested streets;</u> <u>- Consolidating truck deliveries; and</u> <u>- Providing temporary dedicated turn lanes for movement of construction trucks and equipment on and off of the site.</u> <p><u>g. Prohibit truck idling in excess of two minutes.</u></p> <p><u>Off-Road Mobile Source Construction Emissions</u></p> <p><u>h. Use pile drivers powered by an alternative to diesel fuel.</u></p> <p><u>i. Suspend use of all construction equipment operations during second stage smog alerts.</u></p> <p><u>j. Prevent trucks from idling longer than two minutes.</u></p> <p><u>k. Use electricity from power poles rather than temporary diesel-powered generators.</u></p> <p><u>l. Use electricity from power poles rather than temporary gasoline-powered generators.</u></p> <p><u>m. Use mobile equipment powered by an alternative to diesel fuel.</u></p> <p><u>n. Use on-site mobile equipment powered by an alternative to gasoline.</u></p>	Applicant	Field	1. LACDRP	
			Verification and review and include applicable and feasible rules as part of environmental document	2. LACDRP
				3. Prior to Tentative Subdivision Map Approvals
<p><u>LV 4.9-75. Any dry cleaners proposing to locate on site shall utilize the services of off-site cleaning operations at already SCAQMD-permitted locations. No on-site dry cleaning operations shall be permitted within Landmark Village.</u></p>	Applicant	Site Plan Check	1. LACDPW	
			2. LACDPW	
			3. Prior to Issuance of Building Permit	

		<i>8.0 Mitigation Monitoring Plan</i>	
<p><u>LV 4.9-8 (Replaces Mitigation Measure SP 4.10-9) Prior to the approval of each future subdivision proposed in association with Landmark Village, each of the operational emission reduction measures indicated below, which are based on Tables 11-6 and 11-7 of the SCAQMD's CEQA Air Quality Handbook, shall be implemented.</u></p> <p>On-Road Mobile Source Operational Emissions:</p> <p><u>Residential Uses</u></p> <p>a. <u>Provide residents with information regarding the availability of existing shuttle service providers and public transit.</u></p> <p>b. <u>Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters).</u></p> <p>c. <u>Construct off-site pedestrian facility improvements, such as overpasses and wider sidewalks.</u></p> <p>d. <u>Include retail services within or adjacent to residential subdivisions.</u></p> <p>e. <u>Provide residents with information regarding the availability of existing shuttle service providers and public transit.</u></p> <p>f. <u>Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.).</u></p> <p>g. Synchronize traffic lights on streets impacted by development.</p> <p>h. Construct, contribute, or dedicate land for the provision of off-site bicycle trails linking the facility to designated bicycle commuting routes.</p> <p>Commercial Uses</p> <p>i. Provide preferential parking spaces for carpools and vanpools and provide 7 foot 2 inch minimum vertical clearance in parking facilities for vanpool access.</p> <p>j. Implement on-site circulation plans in parking lots to reduce vehicle queuing.</p>	Applicant	Field	1. LACDRP
		Verification and review and include applicable and feasible rules as part of environmental document	2. LACDRP
			3. Prior to Tentative Subdivision Map Approvals

<p><u>k. Improve traffic flow at drive-throughs by designing separate windows for different functions and by providing temporary parking for orders not immediately available for pickup.</u></p> <p><u>l. Set up resident worker training programs to improve job/housing balance.</u></p> <p><u>m. Require retail facilities or special event centers to offer travel incentives such as discounts on purchases for transit riders.</u></p> <p><u>n. Establish a shuttle service from residential core areas to the commercial core areas.</u></p> <p><u>o. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters).</u></p> <p><u>p. Implement a pricing structure for single-occupancy employee parking and/or provide discounts to ridesharers.</u></p> <p><u>q. Include residential units within a commercial project.</u></p> <p><u>r. Utilize parking in excess of code requirements as on-site park-n-ride lots or contribute to construction of off-site lots.</u></p> <p><u>s. Any two of the following:</u></p> <ul style="list-style-type: none"> <u>- Construct off-site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on-site improvements, such as bicycle paths.</u> <u>- Include bicycle parking facilities, such as bicycle lockers and racks.</u> <u>- Include showers for bicycling employees' use.</u>
<p><u>t. Any two of the following:</u></p> <ul style="list-style-type: none"> <u>- Construct off-site pedestrian facility improvements, such as overpasses, wider sidewalks.</u> <u>- Construct on-site pedestrian facility improvements, such as building access that is physically separated from street and parking lot traffic and walk paths.</u> <u>- Include showers for pedestrian employees' use.</u> <p><u>u. Provide shuttles from the commercial core areas to major transit stations.</u></p> <p><u>v. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.).</u></p> <p><u>w. Charge visitors to park at specialty commercial/entertainment developments.</u></p> <p><u>x. Synchronize traffic lights on streets impacted by development.</u></p> <p><u>y. Reschedule truck deliveries and pickups to off-peak hours.</u></p> <p><u>z. Set up paid parking systems where drivers pay at walkup kiosk and exit via a stamped ticket to reduce emissions from queuing vehicles.</u></p> <p><u>aa. Require on-site truck loading zones.</u></p> <p><u>ab. Implement or contribute to public outreach programs.</u></p> <p><u>ac. Require employers not subject to Regulation XV (now Rule 2202) to provide commuter information area.</u></p> <p><u>Stationary Source Operational Emissions</u></p> <p><u>Residential</u></p> <p><u>ad. Use solar or low emission water heaters.</u></p>

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<p><u>ae. Use central water heating systems.</u> <u>af. Use built-in energy-efficient appliances.</u> <u>ag. Provide shade trees to reduce building heating/cooling needs.</u> <u>ah. Use energy-efficient and automated controls for air conditioners.</u> <u>ai. Use double-paned windows.</u> <u>aj. Use energy-efficient low-sodium parking lot lights.</u> <u>ak. Use lighting controls and energy-efficient lighting.</u> <u>al. Orient buildings to the north for natural cooling and include passive solar design (e.g., daylighting).</u> <u>am. Use light-colored roofing materials to reflect heat.</u> <u>an. Increase walls and attic insulation beyond Title 24 requirements.</u> <u>Commercial Uses</u> <u>ao. Use solar or low emission water heaters.</u> <u>ap. Use central water heating systems.</u></p>			
<p><u>aq. Provide shade trees to reduce building heating/cooling needs.</u> <u>ar. Use energy-efficient and automated controls for air conditioners.</u> <u>as. Use double-paned windows.</u> <u>at. Use energy-efficient low-sodium parking lot lights.</u> <u>au. Use lighting controls and energy-efficient lighting.</u> <u>av. Use light-colored roofing materials to reflect heat.</u> <u>aw. Increase walls and attic insulation beyond Title 24 requirements.</u> <u>ax. Orient buildings to the north for natural cooling and include passive solar design (e.g., daylighting).</u></p>			
<p>LV 4.9-26. The project developer(s) shall coordinate with Santa Clarita Transit to identify appropriate bus stop/turnout locations.</p>	Applicant	Site Plan Check	<ol style="list-style-type: none"> 1. LACDPW 2. LACDPW 3. Prior to Issuance of Building Permit
<p>LV 4.9-107. Kiosks containing transit information shall be constructed by the project applicant adjacent to selected future bus stops prior to initiation of bus service to the site.</p>	Applicant	Site Plan Check	<ol style="list-style-type: none"> 1. LACDRP 2. LACDRP 3. Prior to Issuance of Occupancy Permit
<p>LV 4.9-118. Wood-burning fireplaces and stoves shall be prohibited in all residential units. Use of wood in fireplaces shall be prohibited through project Covenants, Conditions, and Restrictions (CC&R).</p>	Applicant	Building Plan Check	<ol style="list-style-type: none"> 1. LACDPW 2. LACDPW 3. Prior to Issuance of Building Permit
<p>4.10 WATER SERVICE</p>			

8.0 Mitigation Monitoring Plan			
SP 4.11-1. The proposed Specific Plan shall implement a water reclamation system in order to reduce the Specific Plan's demand for imported potable water. The Specific Plan shall install a distribution system to deliver non-potable reclaimed water to irrigate land uses suitable to accept reclaimed water, pursuant to Los Angeles County Department of Health Standards. <i>(Consistent with this measure, the Project Description section of this EIR discusses the fact that the Landmark Village project will install and implement a recycled water delivery system in order to reduce the project's demand for imported potable water. As required by this measure, recycled (reclaimed) water would be used to irrigate land uses suitable to accept recycled water, pursuant to Los Angeles County Department of Health standards.)</i>	Applicant	Subdivision Map Improvement Plan Check	1. LACDRP 2. LACDPW 3. Prior to Issuance of Building Permit(s)
SP 4.11-2. Landscape concept plans shall include a palette rich in drought-tolerant and native plants. <i>(Consistent with this measure, the Landmark Village project's landscape plans shall include a palette rich in drought-tolerant and native plants.)</i>	Applicant	Preliminary Landscape Plan Review	1. LACDPW 2. LA County Fire Department or Parks and Recreation 3. Prior to Recordation of Final Map
SP 4.11-3. Major manufactured slopes shall be landscaped with materials that will eventually naturalize, requiring minimal irrigation. <i>(Consistent with this measure, the Landmark Village project's grading/landscape plans shall include a note requiring landscaping with materials that will eventually naturalize, requiring minimal irrigation.)</i>	Applicant	Preliminary Landscape Plan Review	1. LACDPW 2. LA County Fire Department or Parks and Recreation 3. Prior to Recordation of Final Map
SP 4.11-4. Water conservation measures as required by the State of California shall be incorporated into all irrigation systems. <i>(Consistent with this measure, the Landmark Village project shall incorporate into all of its irrigation systems, water conservation measures required by the State of California.)</i>	Applicant	Architectural Plans	1. California Department of Conservation 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permit(s)
SP 4.11-5 The area within each future subdivision within Newhall Ranch shall be annexed to the Valencia Water Company prior to issuance of building permits. (This measure is not applicable to the Landmark Village project, because the project site is already located within the Valencia Water Company's service area.)	Not Applicable		

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<p>SP 4.11-6. In conjunction with the submittal of applications for tentative tract maps or parcel maps which permit construction, and prior to approval of any such tentative maps, and in accordance with the requirements of the Los Angeles County General Plan Development Monitoring System (DMS), as amended, Los Angeles County shall require the applicant of the map to obtain written confirmation from the retail water agency identifying the source(s) of water available to serve the map concurrent with need. If the applicant of such map cannot obtain confirmation that a water source(s) is available for buildout of the map, the map shall be phased with the timing of an available water source(s), consistent with the County's DMS requirements. <i>(Consistent with this measure, Valencia Water Company, the retail water purveyor for the Landmark Village project, has issued its SB 610 water supply assessment for the project, confirming the availability of water to serve the project concurrent with need.)</i></p>	<p>Applicant</p>	<p>Written Confirmation of Water Availability</p>	<p>1. LACDPW 2. LACDPW 3. Prior to Recordation of Final Subdivision Maps</p>
<p>SP 4.11-7. Prior to commencement of use, all uses of recycled water shall be reviewed and approved by the State of California Health and Welfare Agency, Department of Health Services. <i>(Consistent with this measure, the Landmark Village project's recycled water delivery system shall be reviewed and approved by the State of California Health and Welfare Agency, Department of Health Services.)</i></p>	<p>Applicant</p>	<p>Plan Check</p>	<p>1. County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Grading or Occupancy Permit(s) as applicable</p>
<p>SP 4.11-8. Prior to the issuance of building permits that allow construction, the applicant of the subdivision shall finance the expansion costs of water service extension to the subdivision through the payment of connection fees to the appropriate water agency(ies). <i>(Consistent with this measure, prior to issuance of building permits, the applicant for the Landmark Village project shall finance the required water service extension/expansion costs to the Landmark Village subdivision through the payment of connection fees to the appropriate water agency or agencies.)</i></p>	<p>Applicant</p>	<p>Payment of Connection Fees</p>	<p>1. Castaic Lake Water Agency (CLWA)/VWC 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permits</p>
<p>SP 4.11-9. Pursuant to Public Resources Code §21081(a)(2), the County shall recommend that the Upper Santa Clara Water Committee (or Santa Clarita Valley Water Purveyors), made up of the Castaic Lake Water Agency, Los Angeles County Waterworks District No. 36, Newhall County Water District, Santa Clarita Water Division of CLWA and the Valencia Water Company, prepare an annual water report that will discuss the status of groundwater within the Alluvial and Saugus Aquifers, and State Water Project water supplies as they relate to the Santa Clarita Valley. The report will also include an annual update of the actions taken by CLWA to enhance the quality and reliability of existing and planned water supplies for the Santa Clarita Valley. In those years when the Committee or purveyors do not prepare such a report, the applicant at its expense shall cause the preparation of such a report that is acceptable to the County to address these issues.</p>	<p>Applicant</p>	<p>Receipt of Annual Report</p>	<p>1. Board of Supervisors</p>

<p>This annual report shall be provided to Los Angeles County who will consider the report as part of its local land use decision-making process. (As an update, a total of 11 annual water reports have been prepared and provided to the County of Los Angeles, the City of Santa Clarita, and other interested persons and organizations from 1998 through 2008. The latest 2009 Water Report is included in Recirculated Draft EIR Appendix 4.10.)</p>			<p>8.0 Mitigation Monitoring Plan 2. LACDRP 3. Prior to Recordation of Final Subdivision Maps</p>
<p>SP 4.11-10. Pursuant to Public Resources Code §21081(a)(2), the County shall recommend that CLWA, in cooperation with other Santa Clarita Valley retail water providers, continue to update the Urban Water Management Plan (UWMP) for Santa Clarita Valley once every five years (on or before December 31) to ensure that the County receives up-to-date information about the existing and planned water supplies in the Santa Clarita Valley. The County will consider the information contained in the updated UWMP in connection with the County's future local land use decision-making process.</p>	<p>Applicant</p>	<p>Receipt of written identification of water service from retailer</p>	<p>1. Board of Supervisors</p>
<p>The County will also consider the information contained in the updated UWMP in connection with the County's future consideration of any Newhall Ranch tentative subdivision maps allowing construction. (CLWA and other local retail water purveyors are expected to complete the 2005 Urban Water Management Plan (2005 UWMP) for the CLWA service area in the fall 2005. The County will consider the information contained in the adopted 2005 UWMP in connection with the Landmark Village project.) (This mitigation will be also applicable to subsequent updates to the UWMP).</p>			<p>2. LACDRP 3. Prior to Recordation of Final Subdivision Maps</p>
<p>SP 4.11-11 With implementation of the proposed Saugus ASR program, ASR wells shall be spaced so that adjacent non-project wells will not lose pumping capacity as a result of drawdown occurring during pumping of the ASR wells. (This measure is not applicable to the Landmark Village project, because the Saugus ASR program is not needed to satisfy the water demands of the Santa Clarita Valley.)</p>	<p>Not Applicable</p>		
<p>SP 4.11-12 With implementation of the proposed Saugus ASR program, the ultimate number of ASR wells to be constructed shall be sufficient to inject the ultimate target injection volume of 4,500 afy and withdraw the ultimate target withdraw volume of 4,100 afy. (This measure is not applicable to the Landmark Village project, because the Saugus ASR program is not needed to satisfy the water demands of the Santa Clarita Valley.)</p>	<p>Not Applicable</p>		
<p>SP 4.11-13 With implementation of the proposed Saugus ASR program, ASR wells shall be constructed in the following two general areas: (a) South of the Santa Clara River and west of Interstate 5. This location includes areas within the Newhall Ranch Specific Plan boundary. (This area is referred to as the "south ASR well field."); and (b) North of the Santa Clara River and west of Castaic Creek. (This location is referred to as the "north ASR well field.") (This measure is not applicable to the Landmark Village project, because the Saugus ASR program is not needed to satisfy the water demands of the Santa Clarita Valley.)</p>	<p>Not Applicable</p>		

8.0 Mitigation Monitoring Plan

<p>SP 4.11-14 The Saugus Groundwater Banking/ASR program injection water must meet the water quality requirements of the State Regional Water Quality Control Board, Los Angeles Region. The water extracted for use on the Specific Plan site shall meet the Title 22 drinking water standards of the State Department of Health Services. (This measure is not applicable to the Landmark Village project, because the Saugus ASR program is not needed to satisfy the water demands of the Santa Clarita Valley.)</p>	<p>Not Applicable</p>		
<p>SP 4.11-15. Groundwater historically and presently used for crop irrigation on the Newhall Ranch Specific Plan site and elsewhere in Los Angeles County shall be made available by the Newhall Land and Farming Company, or its assignee, to partially meet the potable water demands of the Newhall Ranch Specific Plan. The amount of groundwater pumped for this purpose shall not exceed 7,038 Acre-feet per year (AFY). This is the amount of groundwater pumped historically and presently by the Newhall Land and Farming Company in Los Angeles County to support its agricultural operations. Pumping this amount will not result in a net increase in groundwater use in the Santa Clarita Valley. To monitor groundwater use, the Newhall Land and Farming Company, or its assignee, shall provide the County an annual report indicating the amount of groundwater used in Los Angeles County and the specific land upon which that groundwater was historically used for irrigation.</p>	<p>Applicant</p>	<p>Receipt of written identification of water service provider or applicant</p>	<p>1. Board of Supervisors</p>
<p>For agricultural land located off the Newhall Ranch Specific Plan site in Los Angeles County, at the time agricultural groundwater is transferred from agricultural uses on that land to Specific Plan uses, The Newhall Land and Farming Company, or its assignee, shall provide a verified statement to the County's Department of Regional Planning that Alluvial aquifer water rights on that land will now be used to meet Specific Plan demand. (Consistent with this measure, the applicant will provide the County with the required annual report.)</p>			<p>2. LACDRP</p>
<p>SP 4.11-16. The agricultural groundwater used to meet the needs of the Specific Plan shall meet the drinking water quality standards required under Title 22 prior to use. (Consistent with this measure, the agricultural groundwater used to meet the needs of the Landmark Village project shall meet the drinking water quality standards required under Title 22 prior to use.)</p>			<p>3. Prior to Recordation of Final Subdivision Maps</p>
<p>SP 4.11-17. In conjunction with each project-specific subdivision map for the Newhall Ranch Specific Plan, the County shall require the applicant of that map to cause to be prepared a supplemental or subsequent Environmental Impact Report, as appropriate, pursuant to CEQA requirements. By imposing this EIR requirement on each Newhall Ranch tentative subdivision map application allowing construction, the County will ensure that, among other things, the water needed for each proposed subdivision is confirmed as part of the County's subdivision map application process. This mitigation requirement shall be read and applied in combination with the requirements set forth in revised Mitigation Measure 4.11-6, above, and in Senate Bills 221 and 610, as applicable, regardless of the number of lots in a subdivision map. <i>(This measure has been satisfied by the County requiring preparation of this EIR for the Landmark Village project.)</i></p>	<p>Applicant</p>	<p>Review of Subdivision Map Application</p>	<p>1. LACDPW 2. LACDRP 3. Concurrent with Submittal of Application for Tentative Tract Maps which permit construction.</p>

8.0 Mitigation Monitoring Plan

<p>SP 4.11-18 The storage capacity purchased in the Semitropic Groundwater Banking Project by the Newhall Ranch Specific Plan applicant shall be used in conjunction with the provision of water to the Newhall Ranch Specific Plan. The applicant, or entity responsible for storing Newhall Ranch water in this groundwater bank, shall prepare an annual status report indicating the amount of water placed in storage in the groundwater bank. This report shall be made available annually and used by Los Angeles County in its decision-making processes relating to buildout of the Newhall Ranch Specific Plan. (This measure is not applicable to the Landmark Village project, because the water to be stored in the Semitropic Groundwater Banking Project is not needed to satisfy the water demand of the project or cumulative development in the Santa Clarita Valley.)</p>	<p>Not Applicable</p>		
<p>SP 4.11-19. A Memorandum of Understanding (MOU) and Water Resource Monitoring Program has been entered into between United Water Conservation District and the Upper Basin Water Purveyors, effective August 20, 2001. The MOU/Water Resource Monitoring Program, when executed, will put in place a joint water resource monitoring program that will be an effective regional water management tool for both the Upper and Lower Santa Clara River areas as further information is developed, consistent with the MOU. This monitoring program will result in a database addressing water usage in the Saugus and Alluvium aquifers over various representative water cycles. The parties to the MOU intend to utilize this database to further identify surface water and groundwater impacts on the Santa Clara River Valley. The applicant, or its designee, shall cooperate in good faith with the continuing efforts to implement the MOU and Water Resource Monitoring Program.</p>	<p>Applicant</p>	<p>Review of Initial Study and subdivision maps</p>	<p>1. LACDRP</p>
<p>As part of the MOU process, the United Water Conservation District and the applicant have also entered into a "Settlement and Mutual Release" agreement, which is intended to continue to develop data as part of an on-going process for providing information about surface and groundwater resources in the Santa Clara River Valley. In that agreement, the County and the applicant have agreed to the following:</p>			<p>2. LACDRP</p>

<p>4.3 Los Angeles County and Newhall will each in good faith cooperate with the parties to the MOU and will assist them as requested in the development of the database calibrating water usage in the Saugus and Alluvium aquifers over multi-year water cycles. Such cooperation will include, but not be limited to, providing the parties to the MOU with historical well data and other data concerning surface water</p> <p>4.4 Los Angeles County and Newhall further agree that the County of Los Angeles will be provided with, and consider, the then-existing data produced by the MOU's monitoring program in connection with, and prior to, all future Newhall Ranch subdivision approvals or any other future land use entitlements implementing the Newhall Ranch Specific Plan. If the then-existing data produced by the MOU's monitoring program identifies significant impacts to surface water or groundwater resources in the Santa Clara River Valley, Los Angeles County will identify those impacts and adopt feasible mitigation measures in accordance with the California Environmental Quality Act. (Since the MOU was signed in 2001, the United Water Conservation District and the Upper Basin Water Purveyors [CLWA, Los Angeles County Waterworks District #36, CLWA Santa Clarita Water Division, NCWD and Valencia Water Company] have worked together to accomplish the stated purpose and objectives of the MOU. The MOU has resulted in the collection and analysis of groundwater and other hydrologic data, along with construction and calibration of a sophisticated regional groundwater flow model for the Upper Basin. These efforts benefit the service areas of both the United Water Conservation District and the Upper Basin water purveyors.)</p> <p>and groundwater in the Santa Clara River and, in the case of Newhall, providing Valencia Water Company with access to wells for the collection of well data for the MOU.</p>		<p>8.0 Mitigation</p>	<p>Monitoring Plan 3. Concurrent with Submittal of Application for Tentative Tract Maps which permit construction.</p>
<p>SP 4.11-20 The Specific Plan applicant, or its successors, shall assign its acquired Nickel Water rights to the Valencia Water Company or CLWA, and, in consultation with the Valencia Water Company, CLWA or their designee(s), the applicant shall ensure that the Nickel Water is delivered to the appropriate place of use necessary to serve the Newhall Ranch Specific Plan at the time of need, as determined by the County of Los Angeles through required SB221 and/or SB610 analyses for future subdivision map applications. Upon approval of the Specific Plan, the applicant, Valencia Water Company, CLWA or a designee, will take delivery of the Nickel Water, so that such water will be used, or stored for use, for the Specific Plan in future years.</p> <p>To ensure that an adequate supply of water is available for the Specific Plan over the long-term, the decision of whether or not the Nickel Water agreement should be extended or otherwise canceled cannot occur without first obtaining CLWA's concurrence. If the applicant, or its designee, seeks to not extend the Nickel Water agreement beyond its initial 35-year term, or seeks to cancel said agreement prior to the expiration of its initial 35-year period, or the expiration of the 35-year option period, if exercised, then the applicant, or its designee, must obtain CLWA's written concurrence and that concurrence must include findings to the effect that other equivalent water supplies are available at a comparable cost and that non-extension or cancellation of the agreement will not impact the water supplies of Newhall Ranch and the rest of the Santa Clarita Valley. (This measure is not applicable to the Landmark Village project, because Newhall's Nickel Water rights are not needed at this time to satisfy the water demand of the project or cumulative development in the Santa Clarita Valley. However, as stated above, the applicant has stored Nickel Water in the Semitropic Groundwater Bank, and will continue to do so in future years.)</p>	<p>Not Applicable</p>		

8.0 Mitigation Monitoring Plan			
SP 4.11-21. The applicant, in coordination with RWQCB staff, shall select a representative location upstream and downstream of the Newhall Ranch Specific Plan and sample surface and groundwater quality. Sampling from these two locations would begin upon approval of the first subdivision map and be provided annually to the RWQCB and County for the purpose of monitoring water quality impacts of the Specific Plan over time. If the sampling data results in the identification of significant new or additional water quality impacts resulting from the Specific Plan, which were not previously known or identified, additional mitigation shall be required at the subdivision map level.	Applicant	Water quality sampling in coordination with RWQCB staff	<ol style="list-style-type: none"> 1. LACDRP 2. LACDRP/RWQCB 3. Concurrent with Approval of the first Subdivision Map which permits construction, and annually thereafter.
SP 4.11-22. Beginning with the filing of the first subdivision map allowing construction on the Specific Plan site and with the filing of each subsequent subdivision map allowing construction, the Specific Plan applicant, or its designee, shall provide documentation to the County of Los Angeles identifying the specific portion(s) of irrigated farmland in the County of Los Angeles proposed to be retired from irrigated production to make agricultural water available to serve the subdivision. As a condition of subdivision approval, the applicant or its designee, shall provide proof to the County that the agricultural land has been retired prior to issuance of building permits for the subdivision.	Applicant	Receipt of written report from applicant	<ol style="list-style-type: none"> 1. LACDRP
(Consistent with this measure, the applicant of the Landmark Village project has provided the County with the required documentation. As a condition of approval of the Landmark Village tract map, the applicant will provide proof to the County that the agricultural land in the County proposed to be retired from irrigated production, in fact, has been retired prior to issuance of building permits for the Landmark Village subdivision.)			<ol style="list-style-type: none"> 2. LACDRP 3. Concurrent with Submittal of Application for Tentative Tract Maps which permit construction.
SP Condition of Approval Prior to approval of the first subdivision map which permits construction, a report will be provided by the applicant which evaluates methods to recharge the Saugus Aquifer within the Specific Plan, including the identification of appropriate candidate land areas for recharge. The report shall be subject to approval by the Department of Public Works (DPW) and other applicable regulatory agencies, as determined by DPW	Applicant	Receipt of written report from applicant	<ol style="list-style-type: none"> 1. LACDPW 2. LACDPW 3. Prior to Approval of the first Tentative Tract Map
<u>LV 4.10-1 Prior to the issuance of building permits associated with each subdivision map allowing construction within the Landmark Village site, the applicant shall pay Facility Capacity Fees to the Castaic Lake Water Agency (CLWA) in accordance with CLWA policies and procedures.</u>	<u>Applicant</u>	<u>Payment of Connection Fees</u>	<u>Castaic Lake Water Agency (CLWA)</u> <ol style="list-style-type: none"> 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permits
4.11 WASTEWATER DISPOSAL			

8.0 Mitigation Monitoring Plan

<p>SP 4.12-1. The Specific Plan shall reserve a site of sufficient size to accommodate a water reclamation plant to serve the Newhall Ranch Specific Plan. <i>(This measure is complete).</i></p>	<p>Applicant</p>	<p>Specific Plan Review</p>	<ol style="list-style-type: none"> 1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Final Approval of Specific Plan
<p>SP 4.12-2. A 5.8 to 6.9 million gallon per day (mgd) water reclamation plant shall be constructed on the Specific Plan site, pursuant to County, state, and federal design standards, to serve the Newhall Ranch Specific Plan. <i>(This measure will be implemented pursuant to the project-level analysis already completed for the Newhall Ranch WRP in the certified Newhall Ranch Specific Plan EIR.)</i></p>	<p>WRP Applicant</p>	<p>Review of WRP Construction Plans</p>	<ol style="list-style-type: none"> 1. County Sanitation Districts of Los Angeles County (CSDLAC) 2. CSDLAC 3. Prior to Demand for First Phase or WRP Capacity
<p>SP 4.12-3. The Conceptual Backbone Sewer Plan shall be implemented pursuant to County, state, and federal design standards.</p>	<p>Applicant (Project Engineer)</p>	<p>Review of Tentative Map</p>	<ol style="list-style-type: none"> 1. LACDPW 2. LACDPW 3. Prior to Approval of Tentative Maps
<p>SP 4.12-4. Prior to recordation of each subdivision permitting construction, the applicant of each subdivision shall obtain a letter from the new County sanitation district stating that treatment capacity will be adequate for that subdivision.</p>	<p>Applicant</p>	<p>Review Final Subdivision Map</p>	<ol style="list-style-type: none"> 1. CSDLAC 2. LACDPW 3. Prior to Recordation of Each Final Subdivision Map
<p>SP 4.12-5. All facilities of the sanitary sewer system will be designed and constructed for maintenance by the County of Los Angeles Department of Public Works and the County Sanitation Districts of Los Angeles County, and/or the new County sanitation district or similar entity in accordance with their manuals, criteria, and requirements.</p>	<p>Applicant (Project Engineer)</p>	<p>Review Final Subdivision Plans</p>	<ol style="list-style-type: none"> 1. CSDLAC, LACDPW 2. CSDLAC, LACDPW 3. Prior to Recordation of Each Final Subdivision Map
<p>SP 4.12-6 Pursuant to Los Angeles County Code, Title 20, Division 2, all industrial waste pretreatment facilities shall, prior to the issuance of building permits, be reviewed by the County of Los Angeles Department of Public Works, Industrial Waste Planning and Control Section and/or the new County sanitation district, to determine if they would be subject to an Industrial Wastewater Disposal Permit.</p>	<p>LACDPW</p>	<p>Review of Project Plans</p>	<ol style="list-style-type: none"> 1. LADPW 2. LADPW 3. Prior to Issuance of Building Permit
<p>SP 4.12-7. Each subdivision permitting construction shall be required to be annexed into the Los Angeles County Consolidated Sewer Maintenance District.</p>	<p>LACDPW</p>	<p>Review of Final Sewer Plans</p>	<ol style="list-style-type: none"> 1. CSDLAC, LACDPW 2. CSDLAC, LACDPW 3. After County Acceptance of Sewer Improvements

8.0 Mitigation Monitoring Plan

4.12 SOLID WASTE DISPOSAL			
SP 4.15-1. Each future subdivision which allows construction within the Newhall Ranch Specific Plan shall meet the requirements of all applicable solid waste diversion, storage, and disposal regulations that are in effect at the time of subdivision review. Current applicable regulations include recycling areas that are:	Applicant	Include in Future Subdivision Design and/or environmental documents for Tentative Maps	1. LACDPW, Waste Management Division
· compatible with nearby structures;			2. LACDPW, Waste Management Division
· secured and protected against adverse environmental conditions; <ul style="list-style-type: none"> • clearly marked, and adequate in capacity, number and distribution; • in conformance with local building code requirements for garbage collection access and clearance; • designed, placed and maintained to protect adjacent developments and transportation corridors from adverse impacts, such as noise, odors, vectors, or glare; • in compliance with federal, state, or local laws relating to fire, building, access, transportation, circulation, or safety; and • convenient for persons who deposit, collect, and load the materials. 			3. Prior to Tentative Map Approval
SP 4.15-2. Future multi-family, commercial, and industrial projects within the Specific Plan shall provide accessible and convenient areas for collecting and loading recyclable materials. These areas are to be clearly marked and adequate in capacity, number, and distribution to serve the development.	Applicant	Include in Future Subdivision Design and/or environmental documents for	1. LACDPW, Waste Management Division 2. LACDPW, Waste Management Division 3. Prior to Tentative Map Approval
SP 4.15-3. The first purchaser of each residential unit within the Specific Plan shall be given educational or instructional materials which will describe what constitutes recyclable and hazardous materials, how to separate recyclable and hazardous materials, how to avoid the use of hazardous materials, and what procedures exist to collect such materials.	Applicant	Review of Information Package and Distribution Records	1. LACDRP 2. LACDRP 3. Prior to Issuance of Building Permit (Package) and Occupancy Permits (Records)
SP 4.15-4. The applicant of all subdivision maps which allow construction within the Specific Plan shall comply with all applicable future state and Los Angeles County regulations and procedures for the use, collection, and disposal of solid and hazardous wastes.	Applicant	Include in Future Subdivision Design and/or environmental documents for	1. LACDPW, Waste Management Division 2. LACDPW, Waste Management Division 3. Prior to Tentative Map Approval

8.0 Mitigation Monitoring Plan

<p>LV 4.12-1. The project shall comply with Title 20, Chapter 20.87, of the Los Angeles County Code, Construction and Demolition Debris Recycling. The project proponent shall also prepare a Recycling and Reuse Plan to recycle, at a minimum, 50 percent of the construction and demolition debris, which shall be submitted to the Los Angeles County Environmental Programs Division.</p>	<p>Applicant</p>	<p>Review of Waste Management Plan and corresponding reports</p>	<p>1. Los Angeles County Environmental Programs Division 2. Los Angeles County Environmental Programs Division 3. Prior to Grading Permit</p>
<p>4.13 SHERIFF SERVICES</p>			
<p>SP 4.17-1. As subdivision maps are submitted to the County for approval in the future, the applicant shall incorporate County Sheriff's Department design requirements (such as those pertaining to site access, site security lighting, etc.) which will reduce demands for Sheriff's service to the subdivisions and which will help ensure adequate public safety features within the tract designs.</p>	<p>Applicant</p>	<p>Plan Check Field Verification</p>	<p>1. LA County Sheriff's Department 2. LA County Sheriff's Department 3. Prior to Final Map Approvals and Verify Prior to Issuance of Occupancy Permits</p>
<p>LV 4.13-1. Construction signs shall be posted with a reduced construction zone speed limit. These signs shall be posted to the satisfaction of the California Highway Patrol.</p>	<p>Applicant</p>	<p>Field Verification</p>	<p>1. California Highway Patrol 2. California Highway Patrol 3. During All Construction Phases</p>
<p>LV 4.13-2. Prior to the commencement of construction activities, the project applicant, or its designee, shall retain the services of a private security company to patrol the construction site(s), as necessary, to minimize the potential for trespass, theft and other unlawful activity associated with construction-related activities.</p>	<p>Applicant</p>	<p>Contract Review Field Verification</p>	<p>1. California Highway Patrol 2. California Highway Patrol 3. During Chiquito Canyon Grading Site Phase</p>
<p>LV 4.13-3. Prior to the commencement of construction activities, the project applicant, or its designee shall prepare an approved traffic management plan for construction activities affecting rights-of-way within the jurisdiction of Caltrans and the Los Angeles County Department of Public Works.</p>	<p>Applicant</p>	<p>Review of Approved Traffic Management Plan</p>	<p>1. LA County Sheriff's Department 2. LA County Sheriff's Department 3. Prior to Issuance of Grading Permit</p>

8.0 Mitigation Monitoring Plan

<p>LV 4.13-4. Prior to the issuance of building permits for commercial, office, and industrial development, and for single-family and multi-family residential development where a Capital Improvement/Construction Plan has been adopted, the project applicant, or its designee shall pay the law enforcement facilities fee required by the Los Angeles County Code.</p>	<p>Applicant</p>	<p>Payment of Fees</p>	<p>1. LA County Sheriff's Department 2. LA County Sheriff's Department 3. Prior to Issuance of Building Permits</p>
<p>4.14 FIRE PROTECTION SERVICES</p>			
<p>SP 4.18-1. At the time of final subdivision maps permitting construction in development areas that are adjacent to Open Area and the High Country SMA, a Wildfire Fuel Modification Plan shall be prepared and submitted for approval by the County Fire Department. The Wildfire Fuel Modification Plan shall include the following construction period requirements: (a) a fire watch during welding operations; (b) spark arresters on all equipment or vehicles operating in a high fire hazard area; (c) designated smoking and non-smoking areas; and (d) water availability pursuant to County Fire Department requirements. The wildfire fuel modification plan shall depict a fuel modification zone in conformance with the Fuel Modification Ordinance in effect at the time of subdivision. Within the zone, tree pruning, removal of dead plant material and weed and grass cutting shall take place as required by the County Forester. Fire resistant plant species containing habitat value may be planted in the fuel modification zone.</p>	<p>Applicant</p>	<p>Receipt and Review of Wildfire Fuel Modification Plan</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. Prior to Approval of Final Maps</p>
<p>SP 4.18-2. Each subdivision and site plan for the proposed Specific Plan shall provide sufficient capacity for fire flows of 1,250 gallons per minute (gpm) at 20 pounds per square inch (psi) residual pressure for a two hour duration for single family residential units, and 5,000 gpm at 20 psi residual pressure for a five-hour duration for multi-family residential units and commercial/retail uses, or whatever fire flow requirement is in effect at the time of subdivision and site plan approval.</p>	<p>Applicant</p>	<p>Field Verification of Required Fire Flows</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of Occupancy Permits</p>
<p>SP 4.18-3. Each subdivision map and site plan for the proposed Specific Plan shall comply with all applicable building and fire codes and hazard reduction programs for Fire Zones 3 and 4 that are in effect at the time of subdivision map and site plan approval.</p>	<p>Applicant</p>	<p>Field Verification</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of Occupancy Permits</p>
<p>SP 4.18-4. The developer will provide funding for three fire stations to the Consolidated Fire Protection District of Los Angeles County (the "Fire District") in lieu of developer fees. The developer will dedicate two fire station sites for the two fire stations located in Newhall Ranch. The Fire District will dedicate the site for the fire station to be located at the Del Valle Training Facility. Each fire station site will have a building pad consisting of a net buildable area of one acre. If the cost of constructing the three fire stations, providing and dedicating the two fire station sites, and providing 3-engines, 1 paramedic squad and 63 percent of a truck company exceeds the developer's developer fee obligation for the Newhall Ranch development as determined by the Fire District, the Fire District will fund the costs in excess of the fee obligation.</p>	<p>Not Applicable</p>		

<p>Two of the three fire stations to be funded by the developer will not exceed 6,000 square feet; the third fire station to be funded by the developer will not exceed 8,500 square feet. The Fire District, will fund the cost of any space/square footage of improvement in excess of these amounts as well as the cost of the necessary fire apparatus for any such excess square footage of improvements. The cost of three fire engines, a proportionate share of a truck and one squad to be provided by the developer will be determined based upon the apparatus cost at the time the apparatus is placed in service.</p>
<p>The Fire District and the developer will mutually agree to the requirements of first-phase protection requirements based upon projected response/travel coverage. Such mutual agreement regarding first-phase fire protection requirements ("fire protection plan") and the criteria for timing the development of each of the three fire stations will be defined in a Memorandum of Understanding between the developer and the Fire District. Delivery of fire service for Newhall Ranch will be either from existing fire stations or one of the three fire stations to be provided by the developer pursuant to this section. Prior to the commencement of the operation of any of the three fire stations, fire service may be delivered to Newhall Ranch from existing fire stations or from temporary fire stations to be provided by the developer at mutually agreed-upon locations, to be replaced by the permanent stations which will be located within the Newhall Ranch development. The developer and the Fire District will annually review the fire protection plan to evaluate development and market conditions and modify the Memorandum of Understanding accordingly. <i>(This measure has been superceded by the ongoing MOU process. Mitigation Measure LV 4.14-2 contains the updated requirements.)</i></p>
<p>LV 4.14-1. Prior to approval of a final subdivision map for the project, the applicant must prepare and submit for approval by the County Fire Department a fuel modification plan, a landscape plan and an irrigation plan for the project, as required by Section 1117.2.1 of the County of Los Angeles Fire Code.</p>

<p>8.0 Mitigation Monitoring Plan</p>	
<p>Receipt and Review of Fuel Modification Plan, Landscape Plan, and Irrigation Plan</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. Prior to Approval of First Final Subdivision Map</p>

8.0 Mitigation Monitoring Plan

<p>LV 4.14-2. Prior to the issuance of any building permits, the applicant must obtain approval of a Memorandum of Understanding (MOU) from the Fire Chief of the Fire District that sets out requirements necessary to fully mitigate all impacts of the Newhall Ranch Project on fire protection and emergency medical services. The MOU will include the provisions for apparatus, land, construction, and equipping of fire stations, and other requirements necessary to fully mitigate the impacts of the Newhall Ranch Project on emergency services. For the Landmark Project, the MOU will require a fully equipped fire stations that is</p>	<p>Applicant</p>	<p>Execution of MOU</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of any Building Permit</p>
<p>For the remaining two fire stations, the Fire District will evaluate with the applicant the requirements of first-phase protection based upon projected response/travel coverage with the goal of achieving five-minute response coverage. The results of such evaluation shall include requirements for first-phase fire protection ("fire protection plan") and the criteria for timing the development of each of the fire stations, which will be defined in a Memorandum of Understanding between the applicant and the Fire Chief of the Fire District. Prior to the commencement of the operation of any of the three fire stations, fire service may be delivered to Newhall Ranch from existing fire stations or from temporary fire stations to be provided by the applicant at mutually agreed-upon locations, to be replaced by the permanent stations, which will be located within the Newhall Ranch development. The use of such temporary fire stations must be approved by the Fire District and detailed in the MOU. The applicant and the Fire District will annually review the fire protection plan to evaluate development and market conditions and modify the Memorandum of Understanding accordingly.</p>			
<p>LV 4.14-3. If the project applicant alters the Fire District's road access, it must provide paved access acceptable to the Fire District from Chiquito Canyon Road to the Del Valle facility.</p>	<p>Applicant</p>	<p>Plan Review</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of Building Permits</p>
<p>LV 4.14-4. The proposed development shall provide multiple ingress/egress access for the circulation of traffic, and emergency response issues. Said determinations shall be approved through the tentative map approval.</p>	<p>Applicant</p>	<p>Plan Review</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval</p>
<p>LV 4.14-5. The development of this project shall comply with all applicable code and ordinance requirements for construction, access, water mains, fire flows, and fire hydrants. Specifics for said requirements shall be established during the review and approval process of the tentative map.</p>	<p>Applicant</p>	<p>Plan Review</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval</p>

8.0 Mitigation Monitoring Plan

<p>LV 4.14-6. This property is located within the area described by the Forester and Fire Warden as a Fire Zone 4, Very High Fire Hazard Severity Zone (VHFHSZ). All applicable fire code and ordinance requirements for construction, access, water mains, fire hydrants, fire flows, brush clearance and fuel modification plans, must be met.</p>	<p>Applicant</p>	<p>Plan Review</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of Building Permit</p>
<p>LV 4.14-7. Specific fire and life safety requirements for the construction phase will be addressed at the building fire plan check. There may be additional fire and life safety requirements during this time.</p>	<p>Applicant</p>	<p>Plan Review</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of Building Permit</p>
<p>LV 4.14-8. Every building constructed shall be accessible to Fire Department apparatus by way of access roadways, with an all-weather surface of not less than the prescribed width and indicated on the Tentative or Exhibit "A" maps. The roadway shall be extended to within 150 feet of all portions of the exterior walls when measured by an unobstructed route around the exterior of the building.</p>	<p>Applicant</p>	<p>Plan Review</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of Building Permit</p>
<p>LV 4.14-9. Access roads shall be maintained with a minimum of 10 feet of brush clearance on each side. Fire access roads shall have an unobstructed vertical clearance clear-to-sky with the exception of protected tree species. Protected tree species overhanging fire access roads shall be maintained to provide a vertical clearance of 13 feet, 6 inches. Applicant to obtain all necessary permits prior to the commencement of trimming of any protected tree species.</p>	<p>Applicant</p>	<p>Field Inspection</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. LA County Forester</p>
<p>LV 4.14-10. The maximum allowable grade shall not exceed 15% except where topography makes it impractical to keep within such grade; in such cases, an absolute maximum of 20% will be allowed for up to 150 feet in distance. The average maximum allowed grade, including topographical difficulties, shall be no more than 17%. Grade breaks shall not exceed 10% in 10 feet.</p>	<p>Applicant</p>	<p>Plan Review</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval</p>
<p>LV 4.14-11. When involved with a subdivision in unincorporated areas within the County of Los Angeles, Fire Department, requirements for access, fire flows and hydrants are addressed at the Los Angeles County Subdivision Committee meeting during the subdivision tentative map stage.</p>	<p>Applicant</p>	<p>Plan Review</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval</p>

8.0 Mitigation Monitoring Plan

<p>LV 4.14-12. Fire sprinkler systems are required in some residential and most commercial occupancies. For those occupancies not requiring fire sprinkler systems, it is encouraged that fire sprinkler systems be installed. This will reduce potential fire and life losses. Systems are now technically and economically feasible for residential use.</p>	<p>Applicant</p>	<p>Plan Review</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of Building Permit</p>
<p>LV 4.14-13. Prior to construction, the following items shall be addressed:</p> <p>a. Installation and inspection of the required all weather access to be provided as determined by building permit issuance.</p> <p>b. Fire hydrants shall be installed and tested prior to the clearance for the commencement of construction.</p>	<p>Applicant</p>	<p>Plan Review/Field Inspection</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. Prior to Building Permit Issuance</p>
<p>INSTITUTIONAL: LV 4.14-14. The development may require fire flows up to 8,000 gallons per minute at 20 pounds per square inch residual pressure for up to a four-hour duration as outlined in the 2002 County of Los Angeles Fire Code Appendix III-AA. Final fire flows will be based on the size of buildings, their relationship to other structures, property lines, and types of construction used.</p>	<p>Applicant</p>	<p>Plan Review</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of Building Permit</p>
<p>LV 4.14-15. Fire hydrant spacing shall be based on fire flow requirements as outlined in the 2002 County of Los Angeles Fire Code Appendix III-BB. Additional hydrants will be required if hydrant spacing exceeds specified distances.</p>	<p>Applicant</p>	<p>Plan Review</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval</p>
<p>LV 4.14-16. All access devices and gates shall comply with California Code of Regulations, Title 19, Article 3.05 and Article 3.16. Los Angeles County Fire Department Regulation #5.</p>	<p>Applicant</p>	<p>Plan Review</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval</p>
<p>COMMERCIAL/HIGH-DENSITY RESIDENTIAL: LV 4.14-17. The development may require fire flows up to 5,000 gallons per minute at 20 pounds per square inch residual pressure for up to a five-hour duration. Final fire flows will be based on the size of buildings, their relationship to other structures, property lines, and types of construction used. Fire flows shall be established as part of the tentative map review process with the submittal of architectural details to determine actual flow requirement. If adequate architectural detail is unavailable during the tentative map review process, maximum fire flows will be established with the ability of the fire flow to be changed during the actual architectural plan review by Fire Prevention Engineering for building permit issuance.</p>	<p>Applicant</p>	<p>Plan Review</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of a Building Permit</p>

8.0 Mitigation Monitoring Plan

<p>LV 4.14-18. Fire hydrant spacing shall be 300 feet and shall meet the following requirements:</p> <p>a. No portion of lot frontage shall be more than 200 feet via vehicular access from a public fire hydrant.</p> <p>b. No portion of a building shall exceed 400 feet via vehicular access from a properly spaced public fire hydrant.</p> <p>c. Additional hydrants will be required if hydrant spacing exceeds specified distances.</p> <p>d. When cul-de-sac depth exceeds 200 feet on a commercial street, hydrants shall be required at the corner and mid-block.</p> <p>e. A cul-de-sac shall not be more than 500 feet in length, when serving land zoned for commercial use.</p>	<p>Applicant</p>	<p>Plan Review</p>	<p>1. LA County Fire Department</p> <p>2. LA County Fire Department</p> <p>3. Prior to Issuance of a Building Permit</p>
<p>LV 4.14-19. Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road. A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in length and at the end of all cul-de-sacs.</p>	<p>Applicant</p>	<p>Plan Review</p>	<p>1. LA County Fire Department</p> <p>2. LA County Fire Department</p> <p>3. Prior to Final Map Approval</p>
<p>LV 4.14-20. All on-site driveways/roadways shall provide a minimum unobstructed width of 26 feet, clear-to-sky. The on-site driveway is to be within 150 feet of all portions of the exterior walls of the first story of any building. The centerline of the access driveway shall be located parallel to, and within 30 feet of an exterior wall on one side of the proposed structure.</p>	<p>Applicant</p>	<p>Plan Review</p>	<p>1. LA County Fire Department</p> <p>2. LA County Fire Department</p> <p>3. Prior to Final Map Approval</p>
<p>LV 4.14-21. Driveway width for non-residential developments shall be increased when any of the following conditions will exist:</p> <p>a. Provide 34 feet in width, when parallel parking is allowed on one side of the access roadway/driveway. Preference is that such parking is not adjacent to the structure.</p> <p>b. Provide 42 feet in width, when parallel parking is allowed on each side of the access roadway/driveway.</p> <p>c. Any access way less than 34 feet in width shall be labeled "Fire Lane" on the final recording map, and final building plans.</p> <p>d. For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING – FIRE LANE" in 3-inch-high letters. Driveway labeling is necessary to ensure access for Fire Department use.</p>	<p>Applicant</p>	<p>Plan Review</p>	<p>1. LA County Fire Department</p> <p>2. LA County Fire Department</p> <p>3. Prior to Final Map Approval</p>

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<p>SINGLE-FAMILY/TWO-FAMILY DWELLING UNITS: LV 4.14-22. Single-family detached homes shall require a minimum fire flow of 1,250 gallons per minute at 20 pounds per square inch residual pressure for a two-hour duration. Two-family dwelling units (duplexes) shall require a fire flow of 1,500 gallons per minute at 20 pounds per square inch residual pressure for a two-hour duration. When there are five or more condominium units are taking access on a single driveway, the minimum fire flow shall be increased to 1,500 gallons per minute at 20 pounds per square inch residual pressure for a two-hour duration.</p>	<p>Applicant</p>	<p>Plan Review/Field Inspection</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. Prior to Building Permit Issuance</p>
<p>LV 4.14-23. Fire hydrant spacing shall be 600 feet and shall meet the following requirements: a. No portion of lot frontage shall be more than 450 feet via vehicular access from a public fire hydrant. b. Lots of 1 acre or more shall place no portion of a structure where it exceeds 750 feet via vehicular access from a properly spaced public fire hydrant. c. When cul-de-sac depth exceeds 450 feet on a residential street, fire hydrants shall be required at the corner and mid-block.</p>	<p>Applicant</p>	<p>Plan Review/Field Inspection</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval</p>
<p>LV-4.14-24. Streets or driveways within the development shall be provided with the following: a. Provide 36 feet in width on all streets where parking is allowed on both sides. b. Provide 34 feet in width on cul-de-sacs up to 700 feet in length. This allows parking on both sides of the street. c. Provide 36 feet in width on cul-de-sacs from 701 to 1,000 feet in length. This allows parking on both sides of the street. d. For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING – FIRE LANE" in 3-inch-high letters. Driveway labeling is necessary to ensure access for Fire Department use. e. Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road.</p>	<p>Applicant</p>	<p>Plan Review</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval</p>
<p>LV 4.14-25. A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in length and at the end of all cul-de-sacs.</p>	<p>Applicant</p>	<p>Plan Review</p>	<p>1. LA County Fire Department</p>
			<p>2. LA County Fire Department</p>
			<p>3. Prior to Final Map Approval</p>

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<p>LIMITED ACCESS DEVICES (GATES, ETC.): LV 4.14-26 All access devices and gates shall meet the following requirements: a. Any single-gated opening used for ingress and egress shall be a minimum of 26 feet in width, clear-to-sky. b. Any divided gate opening (when each gate is used for a single-direction of travel – i.e., ingress or egress) shall be a minimum width of 20 feet clear-to-sky. c. Gates and/or control devices shall be positioned a minimum of 50 feet from a public right-of-way, and shall be provided with a turnaround having a minimum of 32 feet of turning radius. If an intercom system is used, the 50 feet shall be measured from the right-of-way to the intercom control device. d. All limited access devices shall be of a type approved by the Fire Department. e. Gate detail plans shall be submitted for review and approval to the Fire Department as part of the tentative map submittal or prior to installation. These plans shall show all locations, widths, and details of the proposed gates.</p>	<p>Applicant</p>	<p>Plan Review</p>	<p>1. LA County Fire Department</p>
			<p>2. LA County Fire Department</p>
			<p>3. Prior to Final Map Approval</p>
<p>4.15 EDUCATION</p>			
<p>SP 4.16-1. The Specific Plan developer shall reserve five elementary schools sites, one junior high school site and one high school site, of 7 to 10, 20 to 25, and 40 to 45 acres in size, respectively, depending upon adjacency to local public parks and joint use agreements.</p>	<p>Applicant</p>	<p>Tentative Tract Map Subdivision Review</p>	<p>1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Final Approval of Tentative Tract Maps</p>
<p>SP 4.16-2. The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land and Farming Company and the Newhall School District.</p>	<p>Applicant</p>	<p>Verification of Compliance from School District</p>	<p>1. Newhall School District 2. LACDPW, Building and Safety 3. Prior to Issuance of Residential Building Permits</p>
<p>SP 4.16-3. The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land and Farming Company and the William S. Hart Union High School District.</p>	<p>Applicant</p>	<p>Verification of Compliance from School District</p>	<p>1. William S Hart Unified High School District (WSHUHSD) 2. LACDPW, Building and Safety 3. Prior to Issuance of Residential Building Permits</p>

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<p>SP 4.16-4. The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land & Farming Company and the Castaic Union School District.</p>	<p>Applicant</p>	<p>Verification of Compliance from School District</p>	<ol style="list-style-type: none"> 1. Castaic Union School District 2. LACDPW, Building and Safety 3. Prior to Issuance of Residential Building Permits
<p>SP 4.16-5. In the event that School District boundaries on the Specific Plan site remain unchanged, prior to recordation of all subdivision maps which allow construction, the developer of future subdivisions which allow construction is to pay to the Castaic Union School District the statutory school fee for commercial/industrial square footage pursuant to Government Code Sections 65995 and 65996, unless a separate agreement to the contrary is reached with the District.</p>	<p>Applicant</p>	<p>Payment of Fees</p>	<ol style="list-style-type: none"> 1. Castaic Union School District 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permits
<p>4.16 PARKS AND RECREATION</p>			
<p>SP 4.20-1. Development of the Newhall Ranch Specific Plan will provide the following acreages of parks and Open Area:</p> <ul style="list-style-type: none"> • Ten public Neighborhood Parks totaling 55 acres; • Open Areas totaling 1,106 acres of which 186 acres are Community Parks; • High Country Special Management Area of 4,214 acres; • River Corridor Special Management Area of 819 acres; • a 15-acre Lake; • an 18-hole Golf Course; and • a trail system consisting of: <ul style="list-style-type: none"> ⊙ -Regional River Trail, ⊙ -Community Trails, and ⊙ -Unimproved Trails. 	<p>Applicant</p>	<p>Subdivision Review for Compliance with Specific Plan</p>	<ol style="list-style-type: none"> 1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Processing of Tentative Subdivision Maps
<p>SP 4.20-2. Prior to the construction of the proposed trail system, the project applicant shall finalize the alignment of trails with the County Department of Parks and Recreation.</p>	<p>Applicant</p>	<p>Verification of Consultation of Department of Parks and Recreation</p>	<ol style="list-style-type: none"> 1. LACDRP 2. LA County Department of Parks and Recreation 3. Prior to Issuance of Grading Permit for Trails
<p>SP 4.20-3. Trail construction shall be in accordance with the County of Los Angeles Department of Parks and Recreation trail system standards. Because the proposed Landmark Village project meets the County parkland requirements and exceeds the Quimby Act requirements, no further mitigation measures are required for the proposed project beyond those adopted as part of the Newhall Ranch Specific Plan.</p>	<p>Applicant</p>	<p>Trails Plan Review Field Verification</p>	<ol style="list-style-type: none"> 1. LA County Department of Parks and Recreation 2. LA County Department of Parks and Recreation 3. Prior to Approval of Trail Plans and Verify Upon Construction Completion

4.17 LIBRARY SERVICES			
<p>SP 4.19-1. The developer will provide funding for a maximum of two libraries (including the site(s), construction, furniture, fixtures, equipment, and materials) to the County Librarian. The developer will dedicate a maximum of two library sites for a maximum of two libraries located in Newhall Ranch in lieu of the land component of the County's library facilities mitigation fee, in accordance with the provisions of Section 22.72.090 of Section 2 of Ordinance No. 98-0068. The actual net buildable library site area required and provided by the developer will be determined by the actual size of the library building(s), the Specific Plan parking requirements, the County Building Code, and other applicable rules. The total library building square footage to be funded by the developer will not exceed 0.35 net square feet per person.</p>	Applicant	Review of Memorandum of Understanding and Library Construction Plan	1. LA County Library
<p>The developer's funding of construction of the library(s) and furnishings, fixtures, equipment and materials for the library(s) will be determined based on the cost factors in the library facilities mitigation fee in effect at the time of commencement of construction of the library(s).</p>			2. LACDPW
<p>Prior to County's issuance of the first residential building permit of Newhall Ranch to the developer, the County Librarian and the developer will mutually agree upon the library construction requirements (location, size, funding and time of construction) based upon the projected development schedule and the population of Newhall Ranch based on the applicable number of average persons per household included in the library facilities mitigation fee in effect at the time. Such mutual agreement regarding the library construction requirements ("Library Construction Plan") and the criteria for timing the completion of the library(s) will be defined in a Memorandum of Understanding between the developer and the County Librarian. Such Memorandum of Understanding shall include an agreement by the developer to dedicate sufficient land and pay the agreed amount of fees on a schedule to allow completion of the library(s) as described below. The developer's funding for library facilities shall not exceed the developer's fee obligation at the time of construction under the developer fee schedule.</p>			3. Prior to Issuance of First Residential Building Permit
<p>If two libraries are to be constructed, the first library will be completed and operational by the time of County's issuance of the 8,000th residential building permit of Newhall Ranch, and the second library will be completed and operational by the time of County's issuance of the 15,000th residential building permit of Newhall Ranch. If the County Librarian decides that only one library will be constructed, the library will be completed and operational by the time of County's issuance of the 10,000th residential building permit of Newhall Ranch.</p> <p>No payment of any sort with respect to library facilities will be required under Section 2.5.3.d. of the Specific Plan in order for the developer to obtain building permits for nonresidential buildings.</p>			

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4.18 AGRICULTURAL RESOURCES			
SP 4.4-1. Purchasers of homes located within 1,500 feet of an agricultural field or grazing area are to be informed of the location and potential effects of farming uses prior to the close of escrow.	Applicant	Include this Information in CC&Rs	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. At Home Sales
SP 4.4-2 New homes within 1,500 feet of farming uses within Ventura County, if any, are to be informed that agricultural activities within Ventura County are protected under the County's right-to-farm ordinance, and are to be provided with copies of the County's Amended Ordinance 3730-5/7/85. (This mitigation measure is not applicable to the Landmark Village tract map site due to its distance from Ventura County.)	Not Applicable		
<u>LV 4.18-1 In order to minimize the premature conversion of agricultural lands and to track that conversion, prior to issuance of the first grading permit in areas of Landmark Village where agricultural soils designated as prime farmland, unique farmland, and/or farmland of statewide importance exist (Pub. Resources Code section 21060.1), Newhall Land shall prepare a phasing map to document the phased discontinuation of existing agricultural activities located within the Landmark Village Project area over the course of its development.</u>	Applicant	Plan Check	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to the Issuance of Building Permits
4.19 UTILITIES			
SP 4.14-1. All development within the Specific Plan area shall comply with the Energy Building Regulations adopted by the California Energy Commission (Title 24 of the California Administrative Code), as applicable.	Applicant	Plan Check Field Verification	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit(s)
SP 4.14-2. Southern California Edison (SCE) or other energy provider is to be notified of the nature and extent of future development on the Specific Plan site prior to recordation of all future subdivisions.	Applicant	Receipt of Notification to Energy Provider	1. LACDRP 2. LACDRP 3. Prior to Recordation of All Subdivisions
SP 4.14-3. All future tract maps are to comply with SCE or other energy provider guidelines for grading, construction, and development within SCE easements.	Applicant (Construction Contractor)	Plan Check	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Prior to Final Tract Map Approvals and Verify Prior to Issuance of Occupancy Permits

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<p>SP 4.14-4. Electrical infrastructure removals and relocations are to be coordinated between the Specific Plan engineer and SCE or other energy provider as each tract is designed and constructed.</p>	<p>Applicant (Specific Plan Engineer)</p>	<p>Receipt of Verification of Such Consultations</p>	<p>1. LACDPW 2. LACDPW 3. Prior to Final Tract Map Approval and During Construction</p>
<p>SP 4.14-5. All future tract maps are to be reviewed by Los Angeles County to ensure adequate accessibility to SCE or other energy provider facilities as a condition of their approvals.</p>	<p>Applicant</p>	<p>Plan Check</p>	<p>1. LACDPW 2. LACDPW 3. Prior to Final Tract Map Approval</p>
<p>SP 4.14-6 Upon transfer of the High Country Special Management Area to another entity for long-term maintenance, continued and adequate access to all Southern California Edison facilities in the High Country Special Management Area is to be ensured within the transfer agreement. <i>(This mitigation measure is not applicable to the Landmark Village project because Landmark Village is not located within the High Country SMA.)</i></p>	<p>Not Applicable</p>		
<p>SP 4.13-1. All development within the Specific Plan area shall comply with the Energy Building Regulations adopted by the California Energy Commission (Title 24 of the California Administrative Code), as applicable.</p>	<p>Applicant/Future Owners and Operators within project</p>	<p>Plan Check Field Verification</p>	<p>1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit(s)</p>
<p>SP 4.13-2. A letter from Southern California Gas Company (SCGC) or other gas provider is to be obtained prior to recordation of all future subdivisions stating that service can be provided to the subdivision under recordation.</p>	<p>Applicant</p>	<p>Receipt of Letter from Gas Provider</p>	<p>1. LACDRP 2. LACDRP 3. Prior to Recordation of Final Maps</p>
<p>SP 4.13-3. The Specific Plan is to meet the requirements of SCGC in terms of pipeline relocation, grading in the vicinity of gas mains, and development within SCGC easements. These requirements would be explicitly defined by SCGC at the future tentative map stage.</p>	<p>Applicant (Construction Contractor)</p>	<p>Receipt and implementation of Such Requirements from SCGC</p>	<p>1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Grading and Construction Operations</p>
<p>SP 4.13-4. All potential buyers or tenants of property in the vicinity of SCGC transmission lines are to be made aware of the line's presence in order to assure that no permanent construction or grading occurs over and within the vicinity of the high-pressure gas mains.</p>	<p>Applicant</p>	<p>Include in Sale/Lease Disclosure Documents</p>	<p>1. LACDRP 2. LACDRP 3. Prior to Issuance of Occupancy Permits</p>

<p>4.20 MINERAL RESOURCES (There are no mineral resource mitigation measures required)</p> <p>4.21 ENVIRONMENTAL SAFETY</p> <p>SP 4.5-1 All final school locations are to comply with the California State Board of Education requirement that no schools be sited within 100 feet from the edge of the right-of-way of 100–110 kV lines; 150 feet from the 220–230 kV lines; and 250 feet from the 345 kV lines. <i>(This mitigation measure is not applicable to the Landmark Village project, because the school on the project site will be located over 500 feet from the nearest overhead transmission line.)</i></p> <p>SP 4.5-2. Only non-habitable structures shall be located within SCE easements.</p> <p>SP 4.5-3. Prior to issuance of grading permits, all abandoned oil and natural gas-related sites must be remediated to the satisfaction of the California Department of Oil and Gas, the Los Angeles County Hazardous Materials Control Program, the South Coast Air Quality Management District, and/or the Regional Water Quality Control Board (Los Angeles region).</p> <p>SP 4.5-5. The Specific Plan is to meet the requirements of SCGC in terms of pipeline relocation, grading in the vicinity of gas mains, and development within Southern California Gas Company easements. These requirements would be explicitly defined by SCGC at the future tentative map stage.</p> <p>SP 4.5-6. All potential buyers or tenants of property in the vicinity of Southern California Gas Company transmission lines are to be made aware of the line’s presence in order to assure that no permanent construction or grading occurs over and within the vicinity of the high-pressure gas mains.</p>	<p>Not Applicable</p> <p>Applicant</p> <p>Applicant/On-Site Oil and Natural Gas Producers</p> <p>Applicant (Civil Engineer)</p> <p>Applicant</p>	<p>Tentative Tract Map Review</p> <p>Confirmation that Oil- and Natural Gas-Related Sites are Satisfactorily Remediated</p> <p>Grading Plan Check</p> <p>Include this Information in CC&Rs</p>	<p>1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Approval of Tract Maps</p> <p>1. California Department of Conservation, Division of Oil and Gas; LA County Hazardous Materials Control Program; SCAQMD; LA County Fire Department and RWQCBLAR 2. California Department of Conservation, Division of Oil and Gas; LA County Hazardous Materials Control Program; SCAQMD; LA County Fire Department and RWQCBLAR 3. Prior to Issuance of Grading Permits</p> <p>1. SCGC 2. LACDPW 3. Prior to Approval of Grading Plan</p> <p>1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. At Home Sales</p>
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<p>SP 4.5-7. In accordance with the provisions of the Los Angeles County Building Code, Section 308(d), all buildings and enclosed structures that would be constructed within the Specific Plan located within 25 feet of oil or gas wells shall be provided with methane gas protection systems. Buildings located between 25 feet and 200 feet of oil or gas wells shall, prior to the issuance of building permits by the County of Los Angeles, be evaluated in accordance with the current rules and regulations of the State of California Division of Oil and Gas. <i>(To reflect updated provisions of the Los Angeles County Building Code, this mitigation measure is replaced by LV 4.21-6.)</i></p>	<p>Applicant (Building Contractors)</p>	<p>Include this Requirement in Building Specifications</p> <p>Field Verification</p>	<p>1. California Department of Conservation, Division of Oil and Gas and LACDPW, Building and Safety</p> <p>2. LACDPW, Building and Safety</p> <p>3. Prior to Issuance of Occupancy Permits</p>
<p>SP 4.5-8. In accordance with the provisions of the Los Angeles County Building Code, Section 308(c), all buildings and structures located within 1,000 feet of a landfill containing decomposable material (in this case the Chiquito Canyon Landfill) shall be provided with a landfill gas migration protection and/or control system. <i>(To reflect updated provisions of the Los Angeles County Building Code, this mitigation measure is replaced by LV 4.21-6.)</i></p>	<p>Applicant (Building Contractors)</p>	<p>Include this Requirement in Building Specifications</p> <p>Field Verification</p>	<p>1. LACDPW, Building and Safety</p> <p>2. LACDPW, Building and Safety</p> <p>3. Prior to Issuance of Occupancy Permits</p>
<p>SP 4.5-9. In accordance with the provisions of the Los Angeles County Code, Title 11, Division 4, Underground Storage of Hazardous Materials regulations, the County of Los Angeles Department of Public Works shall review, prior to the issuance of building permits by the County of Los Angeles, any plans for underground hazardous materials storage facilities (e.g., gasoline) that may be constructed or installed within the Specific Plan.</p>	<p>Applicant (Building Contractors)</p>	<p>Include this Requirement in Building Specifications</p> <p>Field Verification</p>	<p>1. LACDPW, Building and Safety; LA County Fire Department</p> <p>2. LACDPW, Building and Safety; LA County Fire Department</p> <p>3. Prior to Issuance of Occupancy Permits</p>
<p>LV-4.21-1. During grading operations, those areas of the Landmark Village tract map property, the Adobe Canyon borrow site and the Chiquito Canyon grading site identified as formerly containing above-ground storage tanks, current agricultural storage areas and current soil staining by the Phase I Environmental Site Assessment of Landmark Village Tentative Tract Map No. 53108, Highway 126, Newhall Ranch, California (BNA Environmental, May 2004) and Addendum Letter Phase I Environmental Site Assessment of Proposed Water Tank</p>	<p>Applicant</p>	<p>Receipt and Review of Test Results or Verification of Remediation</p>	<p>1. LA County Department of Regional Planning; LA County Fire Department</p>
<p>Locations and Utility Corridor Easements Associated With the Proposed Landmark Village Development Tentative Tract Map No. 53108, State Highway 126, Newhall Ranch, California (BNA Environmental, September 2004), shall be investigated for the presence of petroleum hydrocarbons and hazardous materials and/or wastes, and, where necessary, shall be</p>			<p>2. LA County Department of Regional Planning; LA County Fire Department</p>
<p>remediated in conformance with applicable federal, state and local laws, to the satisfaction of the California Department of Conservation, Division of Oil and Gas, the Los Angeles County Hazardous Materials Control Program, the South Coast Air Quality Management District, and/or the Regional Water Quality Control Board (Los Angeles region).</p>			<p>3. During grading operations</p>

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<p>LV-4.21-2. During grading operations, all former oil wells located on the Landmark Village tract map property, the Adobe Canyon borrow site and the Chiquito Canyon grading site shall be reabandoned according to the requirements of the California Department of Conservation, Division of Oil and Gas, if such sites are to be disturbed or are located in an area of development.</p>	<p>Applicant (Civil Engineer and Well Abandonment Specialist)</p>	<p>Receipt of Confirmation of Reabandonment</p>	<p>1. California Department of Conservation, Division of Oil and Gas, Building and Safety 2. California Department of Conservation, Division of Oil and Gas, Building and Safety 3. During Grading Operations</p>
<p><u>LV-4.21-6 In accordance with the provisions of the 2008 Los Angeles County Building Code (Title 26), Section 110.4, all buildings and enclosed structures that would be constructed within the Specific Plan located within 25 feet of oil or gas wells shall be designed according to recommendations contained in a report prepared by a licensed civil engineer and approved by the Building Official. Buildings located within 25 feet and 200 feet of oil or gas wells shall, prior to the issuance of building permits by the County of Los Angeles, be evaluated in accordance with the current rules and regulations of the State of California Division of Oil and Gas. (This mitigation measure replaces Specific Plan mitigation measure SP 4.21-7.)</u></p>	<p>Applicant (Civil Engineer and Well Abandonment Specialist)</p>	<p>Field Verification</p>	<p>1. California Department of Conservation, Division of Oil and Gas, Building and Safety</p>
			<p>2. California Department of Conservation, Division of Oil and Gas, Building and Safety</p>
			<p>3. Prior to Issuance of Building Permit</p>
<p>LV-4.21-3. During grading operations, all pipelines located on the Landmark Village tract map property or the Chiquito Canyon grading site that will no longer be used to transport oil products shall be reabandoned according to the requirements of the California Department of Conservation, Division of Oil and Gas. The soil beneath these pipelines shall be assessed for petroleum hydrocarbons. Any contaminated soil located within grading operations or development areas shall be remediated in conformance with applicable federal, state and local laws, to the satisfaction of the California Department of Conservation, Division of Oil and Gas, the Los Angeles County Hazardous Materials Control Program, the South Coast Air Quality Management District, and/or the Regional Water Quality Control Board (Los Angeles region). Any pipeline to remain in use shall be assessed for hydrocarbon leakage.</p>	<p>Applicant (Civil Engineer and Pipeline Abandonment Specialist)</p>	<p>Receipt of Confirmation of Reabandonment Receipt and Review of Test Results or Verification of Remediation</p>	<p>1. California Department of Conservation, Division of Oil and Gas, Building and Safety; LA County Fire Department 2. California Department of Conservation, Division of Oil and Gas, Building and Safety; LA County Fire Department 3. During Grading Operations</p>

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<p>LV-4.21-4. During grading operations, all scattered suspect asbestos-containing material debris located on the Landmark Village tract map property, the Adobe Canyon borrow site and the Chiquito Canyon grading site shall be disposed of in accordance with applicable federal, state and local requirements.</p>	<p>Applicant (Building Contractors)</p>	<p>Field Verification</p>	<p>1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. During Grading Operations</p>
<p>LV-4.21-5. In the event that previously unidentified, obvious, or suspected hazardous materials, contamination, underground storage tanks, or other features or materials that could present a threat to human health or the environment are discovered during construction, construction activities shall cease immediately until the subject site is evaluated by a qualified professional. Work shall not resume until appropriate actions recommended by the professional have been implemented to demonstrate that contaminant concentrations do not exceed risk-based criteria.</p>	<p>Applicant (Building Contractors)</p>	<p>Field Verification</p>	<p>1. LA County Fire Department 2. LA County Fire Department 3. During All Phases of Construction</p>
<p><u>LV-4.21-7 In accordance with the provisions of the 2008 Los Angeles County Building Code (Title 26), Section 110.3, all buildings and structures located within 1,000 feet of a landfill containing decomposable material (in this case, Chiquita Canyon Landfill) shall be provided with a landfill gas migration protection and/or control system. (This mitigation measure replaces Specific Plan mitigation measure SP 4.21-8.)</u></p>	<p>Applicant (Building Contractors)</p>	<p>Field Verification</p>	<p>1. LACDPW, Building and Safety</p>
			<p>2. LACDPW, Building and Safety</p>
			<p>3. During All Phases of Construction</p>
<p>4.22 CULTURAL/PALEONTOLOGICAL RESOURCES</p>			
<p>SP 4.3-1. Any adverse impacts to California-LAN-2133, -2235, and the northern portion of -2233 are to be mitigated by avoidance and preservation. Should preservation of these sites be infeasible, a Phase III data recovery (salvage excavation) operation is to be completed on the sites so affected, with archaeological monitoring of grading to occur during subsequent soils removals on the site. This will serve to collect and preserve the scientific information contained therein, thereby mitigating all significant impacts to the affected cultural resource.</p>	<p>Applicant (Archaeologist)</p>	<p>Qualified Archaeologist Present During Grading Activities of Sites</p>	<p>1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to and During Grading Activities, as appropriate</p>
<p>SP 4.3-2. Any significant effects to California-LAN-2241 are to be mitigated through site avoidance and preservation. Should this prove infeasible, an effort is to be made to relocate, analyze, and re-inter the disturbed burial at some more appropriate and environmentally secure locale within the region.</p>	<p>Applicant (Archaeologist)</p>	<p>Qualified Archaeologist Present During Grading Activities of site if not located before</p>	<p>1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to and During Grading Activities, as appropriate</p>

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<p>SP 4.3-3. In the unlikely event that additional artifacts are found during grading within the development area or future roadway extensions, an archaeologist will be notified to stabilize, recover, and evaluate such finds.</p>	<p>Applicant (Archaeologist)</p>	<p>Include this Measure in Subdivision Map Conditions if appropriate</p>	<p>1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. During Tentative Map Processing</p>
<p>SP 4.3-4. As part of an inspection testing program, a Los Angeles County Natural History Museum-approved inspector is to be on site to salvage scientifically significant fossil remains. The duration of these inspections depends on the potential for the discovery of fossils, the rate of excavation, and the abundance of fossils. Geological formations (like the Saugus Formation) with a high potential will initially require full time monitoring during grading activities. Geologic formations (like the Quaternary terrace deposits) with a moderate potential will initially require half-time monitoring. If fossil production is lower than expected, the duration of monitoring efforts should be reduced. Because of known presence of microvertebrates in the Saugus Formation, samples of at least 2,000 pounds of rock shall be taken from likely horizons, including localities 13, 13A, 14, and 23. These samples can be stockpiled to allow processing later to avoid delays in grading activities.</p>	<p>Applicant (Archaeologist)</p>	<p>LA County Natural History Museum-Approved Inspector Present During Grading Activities</p>	<p>1. LA County Department of Regional Planning</p>
<p>The frequency of these samples will be determined based on field conditions. Should the excavations yield significant paleontological resources, excavation is to be stopped or redirected until the extent of the find is established and the resources are salvaged. Because of the long duration of the Specific Plan, a reassessment of the paleontological potential of each rock unit will be used to develop mitigation plans for subsequent subdivisions. The report shall include an itemized inventory of the fossils, pertinent geologic and stratigraphic data, field notes of the collectors and include recommendations for future monitoring efforts in those rock units. Prior to grading, an agreement shall be reached with a suitable public, non-profit scientific repository, such as the Los Angeles County Museum of Natural History or similar institution, regarding acceptance of fossil collections.</p>			<p>2. LA County Department of Regional Planning 3. During Grading Activities in the Pico Formation, Saugus Formation, Quaternary Terrace Deposits, and Quaternary Older Alluvium</p>
<p>LV 4.22-1. Although no other significant cultural resources were observed or recorded, all grading activities and surface modifications must be confined to only those areas of absolute necessity to reduce any form of impact on unrecorded (buried) cultural resources that may exist within the confines of the project area. In the event that resources are found during construction, activity shall stop and a qualified archaeologist shall be contacted to evaluate the resources. If the find is determined to be a historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Construction work may continue on other parts of the construction site while historical/archeological mitigation takes place, pursuant to Public Resources Code Section 21083.2(i).</p>	<p>Applicant (Archaeologist)</p>	<p>Construction Activity Stopped</p>	<p>1. LA County Department of Regional Planning</p>
		<p>Qualified Archaeologist Contacted</p>	<p>2. LA County Department of Regional Planning</p>
			<p>3. During Grading Activities, as appropriate</p>

8.0 Mitigation Monitoring Plan

<p>LV 4.22-2. For archeological sites accidentally discovered during construction, there shall be an immediate evaluation of the find by a qualified archeologist. If the find is determined to be a historical or unique archeological resource, as defined under CEQA, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be provided. Construction work may continue on other parts of the construction site while historical/archeological mitigation takes place, pursuant to Public Resources Code Section 21083.2(i).</p>	<p>Applicant (Archaeologist)</p>	<p>Construction Activity Stopped Qualified Archaeologist Contacted</p>	<p>1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. During Grading Activities, as appropriate</p>
<p><u>LV 4.22-3 Scientific specimens are to become the property of a public, nonprofit educational institution, such as the Los Angeles County Museum of Natural History (or similar institution). Most institutions are now requiring, as conditions for accepting the materials, that significant fossils be prepared, identified to a reasonable level, and catalogued before donation. Therefore, to meet these requirements, prior to the start of Project-related grading, an agreement shall be reached with a suitable scientific repository regarding acceptance of the fossil collection.</u></p>	<p>Applicant (Archaeologist)</p>	<p>Prior to Issuance of Grading Permit</p>	<p>1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Grading Activities, as appropriate</p>
<p><u>LV 4.22-4 A qualified paleontologist shall be retained to monitor and salvage scientifically significant fossil remains. The duration of these inspections depends on the potential for the discovery of fossils, the rate of excavation, and the abundance of fossils.</u> <u>(a) The Saugus and Pico Formations have a high potential to yield paleontological resources and will require continuous monitoring during all grading activities. This may require use of multiple paleontologists working on the site at the same time if simultaneous ground disturbing activities are occurring over an extensive area to assure all areas of excavation are being fully monitored for the presence of paleontological resources. The number of required monitors shall be determined by Project's monitoring paleontologist.</u> <u>(b) The older dissected Pleistocene formations have a moderate potential to yield paleontological resources and will require half-time monitoring during all grading activities by a qualified paleontologist(s). Periodic review of the paleontological potential assigned to each rock unit shall be conducted at the end of each phase of grading. This reassessment of potential will be used to develop mitigation plans for future phases of development. If fossil production is lower than expected, the duration of the monitoring efforts should be reduced to less than continuous monitoring during all grading activities.</u></p>	<p>Applicant (Archaeologist)</p>	<p>During Grading</p>	<p>1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. During Grading Activities, as appropriate</p>
<p><u>LV 4.22-5 The paleontologist, in consultation with the grading contractor, developer, and Los Angeles County inspector, shall have the power to divert temporarily or direct grading efforts in the area of an exposed fossil to allow evaluation and, if necessary, salvage of exposed fossils.</u></p>	<p>Applicant (Archaeologist)</p>	<p>During Grading</p>	<p>1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. During Grading Activities, as appropriate</p>

4.23 CLIMATE CHANGE			
LV 4.23-1. All residential buildings on the project site that are enabled by approval of the proposed project shall be designed to provide improved insulation and ducting, low E glass, high efficiency air conditioning units, and radiant barriers in attic spaces, as needed, or equivalent to ensure that all residential buildings operate at levels 15 percent better than the standards required by the <u>2008</u> version of Title 24. applicable at the time the building permit applications are filed.	Applicant	Plan Check	1. LACDPW 2. LACDPW 3. Prior to Issuance of Building Permits
LV 4.23-2. All commercial and public buildings on the project site that are enabled by approval of the proposed project shall be designed to provide improved insulation and ducting, low E glass, high efficiency HVAC equipment, and energy efficient lighting design with occupancy sensors, <u>as needed</u> , or equivalent to ensure that all commercial and public buildings operate at levels 15 percent better than the standards required by the 2008 version of Title 24 applicable at the time the building permit applications are filed. <u>Notwithstanding this measure, all nonresidential buildings shall be designed to comply with the then-operative Title 24 standards applicable at the time building permit applications are filed. For example, if new standards are adopted that supersede the 2008 Title 24 standards, the nonresidential buildings shall be designed to comply with those newer standards and, if necessary, exceed those standards by an increment that is equivalent to a 15 percent exceedance of the 2008 Title 24 standards.</u>	Applicant	Plan Check	1. LACDPW 2. LACDPW 3. Prior to Issuance of Building Permits
LV 4.23-3. The project applicant or designee shall produce <u>or cause to be produced</u> or purchase renewable electricity, <u>or secure greenhouse gas offsets or credits from a public agency (e.g., CARB; SCAQMD) endorsed market</u> , equivalent to the installation of one 2.0 kilowatt photovoltaic (i.e., solar) power system <u>no smaller than 2.0 kilowatts</u> , when undertaking the design and construction of each single-family detached residential unit on the project site. that is enabled by approval of the proposed project; or, at the applicant's option, prior to commencing construction, the applicant shall secure offsets or credits for carbon dioxide equivalents from either the Climate Action Reserve of the California Climate Action Registry, the Chicago Climate Exchange, or similar reserve/exchange; or, alternatively, at the applicant's option, the applicant may pay to the South Coast Air Quality Management District (District) the equivalent amount of funds that would be due to buy credits from the Climate Action Reserve, Chicago Climate Exchange, or similar reserve/exchange for greenhouse gas emission mitigation purposes. In any case, installation of individual photovoltaic systems shall be considered when undertaking the design and construction of single family residential units on the project site.	Applicant	Production of Payment to renewable electricity	1. LACDPW 2. LACDPW 3. Prior to Issuance of Building Permits

8.0 Mitigation Monitoring Plan

<p>LV 4.23-4. The project applicant or designee shall produce <u>or cause to be produced</u> or purchase renewable electricity, <u>or secure greenhouse gas offsets or credits from a public agency (e.g., CARB; SCAQMD) endorsed market</u>, equivalent to the installation of one 2.0 kilowatt photovoltaic (i.e., solar) power system <u>no smaller than 2.0 kilowatts</u>, on each 1,600 square feet of nonresidential roof area provided on the project site. or, at the applicant's option, prior to commencing construction, the applicant shall secure offsets or credits for carbon dioxide equivalents from either the Climate Action Reserve of the California Climate Action Registry, the Chicago Climate Exchange, or similar reserve/exchange; or, alternatively, at the applicant's option, the applicant may pay to the South Coast Air Quality Management District (District) the equivalent amount of funds that would be due to buy credits from the Climate Action Reserve, Chicago Climate Exchange, or similar reserve/exchange for greenhouse gas emission mitigation purposes. In any case, installation of individual photovoltaic systems shall be considered when undertaking the design and construction of nonresidential buildings on the project site.</p>	<p>Applicant</p>	<p>Production of Payment to renewable electricity</p>	<p>1. LACDPW 2. LACDPW 3. Prior to Issuance of Building Permits</p>
<p>LV 4.23-5. Consistent with the Governor's Million Solar Roofs Plan, the project applicant or designee, acting as the seller of any single-family residence constructed as part of the development of at least 50 homes that are intended or offered for sale, shall offer a solar energy system option to all customers that enter negotiations to purchase a new production home constructed on land for which a tentative subdivision map has been deemed complete. The seller shall disclose the total installed cost of the solar energy system option, and the estimated cost savings.</p>	<p>Applicant</p>	<p>Prior to Escrow Negotiations</p>	<p>1. LACDPW 2. LACDPW 3. Prior to Entering into Escrow with Potential Single Family Home Buyers</p>
<p>LV 4.23-6. The project applicant shall use solar water heating for all pools located at the Landmark Village recreation centers.</p>	<p>Applicant</p>	<p>Plan Check and Field Verification</p>	<p>1. LACDPW 2. LACDPW 3. Prior to Issuance of Building Permits for the Recreation Centers</p>
<p>LV 4.23-7. The project applicant, in accordance with Los Angeles County requirements, will design and construct the approximately 11,000 square foot fire station so as to achieve LEED silver certification.[1]</p>	<p>Applicant</p>	<p>Plan Check</p>	<p>1. LACDPW 2. LACDPW 3. Prior to Issuance of the Building Permit for the Fire Station</p>

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